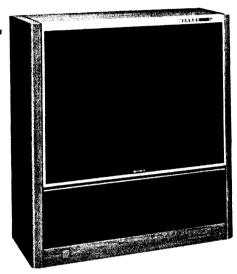


## SERVICE MANUAL



US Model Chassis No. SCC-758A-A

May, 1986

#### **SPECIFICATIONS**

Structure

Screen and projector, rear projection

Projection system

3-picture tubes, 3 lenses, horizontal

in-line system

Picture tube

5.5 inch high-brightness monochrome

tubes, with coolant sealed, dust

inhibition anti-static faces

Projection lenses

High-performance, large-diameter

hybrid lens F 1.0

Screen material Acrylic plastic, Fresnel lenticular

type

Projected picture size (measured diagonally)

46 inches

Viewing distance

2.5m (approx. 81/5 ft) minimum to 16m (approx. 521/2 ft) maximum

Optimum seating arrangement

Within approx. 80 degrees from

Screen brightness

Typical 220 foot-Lamberts

Television system

American TV standards

Channel coverage

VHF: 2-13 UHF: 14-69 CATV: 1-125 Antenna

Inputs

Outputs

Speaker

VIDEO 2 IN AV (AV jack)

Audio: 408mVrms (100% modulation, 47 kilohms)

for VHF/UHF/CATV

RGB multi input (See the diagram) RGB AUDIO IN (stereo mini jack) CONTROL IN (mini jack) 5Vp-p 75-ohm external antenna terminal

75-ohm external antenna terminal

unbalanced, sync negative

unbalanced, sync negative

Audio: 408mVrms (100% modula-

VIDEO 1,3 IN (phono jacks)

Video: 1Vp-p, 75 ohms

tion, 47 kilohms)

Video: 1V p-p, 75 ohms

for VHF/UHF/CATV

AUX 75-ohm auxiliary antenna

terminal

MONITOR OUT (phono jacks) Video: 1Vp-p, 75 ohms

unbalanced, sync negative Audio: 408mVrms (100% modula-

tion, 1 kilohm)

CONTROL OUT (mini jack) 5Vp-p TO CONVERTER terminal

Three-way speaker system

Woofer: 12×19cm (43/4×71/2 inches)

2 units

Midrange: 5cm (2 inches) dia. 2 units Tweeter: 2cm (13/16 inch) dia. 2 units

- continued on next page -

COLOR REAR VIDEO PROJECTOR SONY®





Power requirements

120V AC, 60Hz

Power consumption

186W (max.), 135W (average)

4W (in standby condition)

**Dimensions** 

 $1106 \times 1213 \times 640 \text{ mm (w/h/d)}$ 

 $(43^{1/2} \times 47^{3/4} \times 25^{1/4} \text{ inches})$ 

Weight

73 kg (161 lb. 3 oz.)

Accessories supplied

Remote Commander RM-730 (1)

with 2 size AA batteries Antenna connector (1)

Optional accessories

Connecting cables (See page 14)

Cables for RGB connector SMF-502 (8-pin ← 25-pin) SMF-505 (8-pin ← 18-pin) SMF-507 (8-pin ← 9-pin)

#### RGB multi input (8-pin plug)

Pin No.	Signal assignment	
1	Intensity input	
2	Red input	
3	Green input	
4	Blue input	
5	Ground	
6	Ground	
7	H. sync or composite sync	
8	V. sync	

Design and specifications are subject to change without notice.

### **WARNING**

To prevent fire or shock hazard, do not expose the set to rain or moisture.





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

#### CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

#### SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY SHADING AND MARK 

NO THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

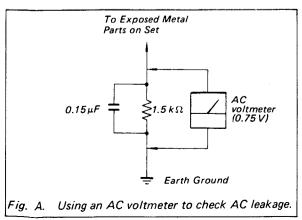
#### SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
- Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors
- Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
- 4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the line cord for cracks and abrasion.
   Recommend the replacement of any such line cord to the customer.
- Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has

the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

- 8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



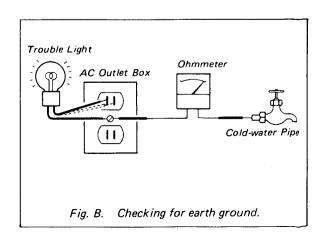
#### **LEAKAGE TEST**

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

#### **HOW TO FIND A GOOD EARTH GROUND**

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)



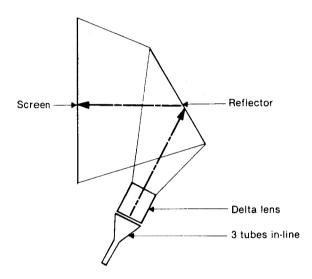
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## SECTION 1 GENERAL

#### 1-1. FEATURES

- Remote control color rear video projector with a multifunction Remote Commander projects TV pictures on a self-contained 46-inch screen (measured diagonally).
- A unique "folded optics" system with one reflector less than other systems provides "compact and slim" projector design.



- New "Optical coupling and cooling" system remarkably improves the picture contrast.
- Two-way built-in speakers provide powerful sound reproduction.

- Built-in stereo decoder decodes MTS (Multichannel TV sound) broadcasts into left and right stereo or SAP (Second Audio Program) channels.\*
- Multi-band VHF/UHF/CATV tuner receives up to 125 cable channels for total of 181 possible off-air and cable channels.
- Two built-in video and L/R audio line inputs and a new AV uniconnector allow direct hook-up to VCRs, video disc players, video games or other audio/video sources. The AV uniconnector receives combined video and L/R audio signals for one easy connection.
- Built-in video and L/R audio line outputs provide the selected output from the TV tuner or any of the equipment connected to the audio-video line inputs or the AV uniconnector.
- Built-in RGB input for higher resolution display of computer-generated text and color graphics.
- On-screen displays for easy reference to operating modes and adjustments.
- Dynamic Picture™ circuitry automatically adjusts the picture contrast to produce more detail in bright and dark areas of the scene.
- Dynamic Focus<sup>™</sup> circuitry automatically focuses the scanning electron beam for enhanced sharpness over the entire picture, especially in corners.
- Colorpure Filter<sup>TM</sup> separately processes B/W picture information from color information to produce a dramatically sharper picture
  - \*Depends on availability of off-air stereo broadcasts

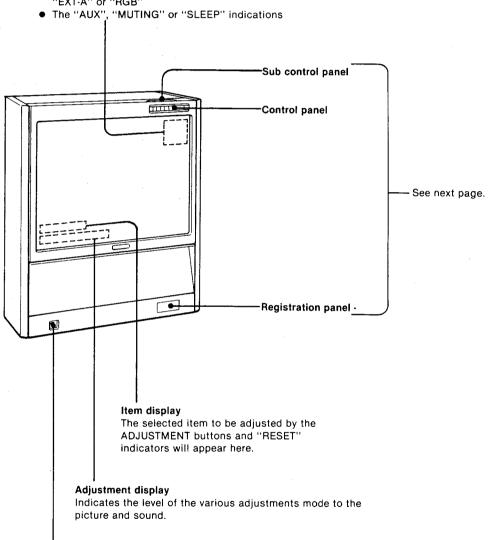
#### 1-2. LOCATION OF CONTROLS

For details on the use of each control, refer to the pages indicated in brackets.

See page 12 for the location of jacks and controls on the back.

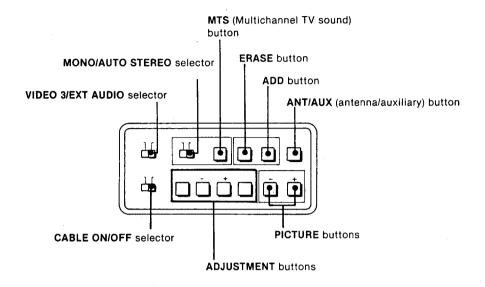
#### On-screen display for:

- Channel numbers
- "MAIN", "SAP" or "BOTH" modes
- The selected input sources "VIDEO 1, 2 or 3", "EXT-A" or "RGB"

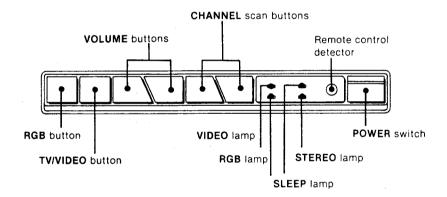


VIDEO 2 IN (AV) input uniconnector (AV jack) [13] (cover removed)

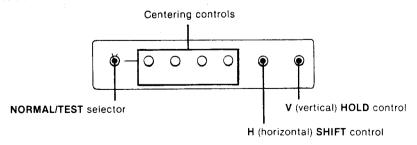
#### SUB CONTROL PANEL (top of the cabinet)



#### **CONTROL PANEL**



#### **REGISTRATION PANEL**



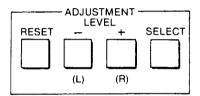
#### 1-3. ADDITIONAL PICTURE AND SOUND ADJUSTMENT

(Hue: Color: Brightness: Sharpness: Treble: Bass: Balance)

Additional picture and sound adjustments besides the adjustments made by the PICTURE and VOL (volume) buttons can be made as follows although your unit comes with its picture and sound preset at the factory for optimum performance.

The adjustments made can be cleared and the factory preset levels will be restored at once when the **RESET button** is pressed. (A "RESET" indicator will appear for a few seconds.)

Controls are inside the sub control panel.



1 Press SELECT button consecutively until the onscreen display of the item you desire to adjust appears. The display will change as follows:

HUE→COLOR→BRIGHT→SHARP→TREBLE→BASS →BALANCE→back to HUE

The display will disappear after a few seconds but will appear again when the next step is taken.

2 Press LEVEL -(L)/+(R) button to adjust the selected item

	Selected item	-(L) Left button	+(R) Right button
PICTURE ADJUSTMENT	HUE	Skin tones become purplish	Skin tones become greenish
	COLOR	For less color intensity	For more color intensity
	BRIGHT	For less brightness	For more brightness
	SHARP	For less sharpness	For more sharpness
SOUND ADJUSTMENT	TREBLE	To decrease treble response	To increase treble response
	BASS	To decrease bass response	To increase bass response
	BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

#### On-screen color-bar displays

When any of the above adjustments are made, a colored segmented bar appears on the screen to indicate the appropriate setting level.

- The HUE setting is indicated by the ratio of the red (left) and green (right) segments.
- The COLOR level is indicated by the number of red segments.
- The BRIGHT, SHARP, TREBLE and BASS levels are indicated by the number of green segments.
- The stereo BALANCE is indicated by the ratio of the green (left) and red (right) segments.
- While the VOL or PICTURE button is pressed, the number of green segments show the sound or picture level.

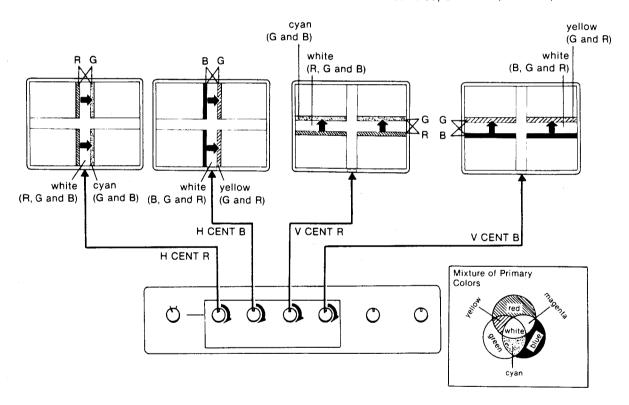
#### 1-4. REGISTRATION ADJUSTMENT

When the red, green and blue lines are not be superimposed (the cross may not be seen as white), perform the registration adjustment yourself. Should the difficulty persist, contact your Sony dealer.

Follow steps 1 through 6.

- 1 Turn the set on with the POWER switch.
- 2 Open the registration panel and set the NORM/TEST selector to TEST. A built-in test pattern will be displayed on the screen.
- 3 Adjust the H CENT(B) and H CENT(R) controls to converge the blue and red vertical lines with the green line.
- 4 Adjust the V CENT(B) and V CENT(R) controls to converge the blue and red horizontal lines with the green line.

(In the illustration below: R = Red, G = Green, B = Blue)



As you turn the controls clockwise, the lines move in the direction indicated in the illustrations. To move the lines in the opposite direction, turn the controls counterclockwise.

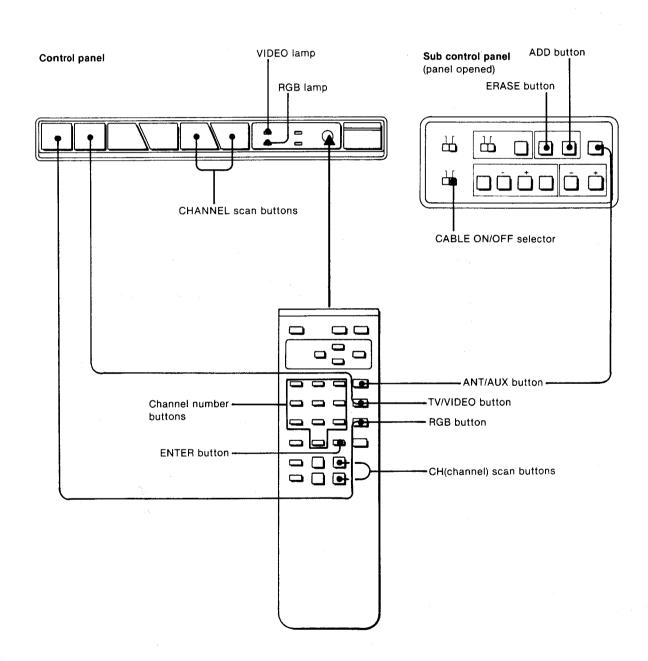
- 5 Repeat steps 3 and 4 until the cross appears white.
- 6 After the adjustment is completed, set the NORM/TEST selector to NORM and close the registration panel.

#### 1-5. PRESETTING CHANNELS

Receivable channels of your set are:

VHF: 2-13 UHF: 14-69 CATV: 1-125

By adding and erasing channels, you can preset your set so that only the desired channels appear in sequence when the CHANNEL +/- are pressed.



#### **PREPARATION**

1 Turn on the set.

2 Make sure the following are properly set. On-screen "VIDEO 1, 2 or 3", "EXT-A" or "RGB" indicators and the RGB or VIDEO lamp should be off. (Press TV/VIDEO button or RGB button as necessary until they go out.)

3 According to the channel to be added or erased, check the following and make the necessary changes.

• CABLE ON/OFF selector:

For VHF and UHF channels, set to OFF I. For cable TV channels, set to ON I.

On-screen "AUX" indication

(Press ANT/AUX button as necessary.)
For VHF, UHF and regular cable TV channels, the indication should be off.
For pay cable TV channels, the indication should be displayed.

#### **ADDING CHANNELS**

1 Select the channel to be added by pressing the channel number buttons and then ENTER.

2 Press ADD.

A "+" indication will appear on the left of the channel display on the screen, indicating that the channel will appear in the proper numerical sequence when you press CHANNEL +/-.

Repeat steps 1 and 2 for other channels to be added.

#### **ERASING CHANNELS**

- 1 Select the channel to be erased.
- 2 Press ERASE.

A "-" indication will appear on the left of the channel display on the screen, indicating that the channel has been erased. When CHANNEL +/- are pressed, you will see that the channel is skipped over in the numerical sequence.

Repeat steps 1 and 2 for other channels to be erased. To add erased channels again, follow the steps in "ADDING CHANNELS".

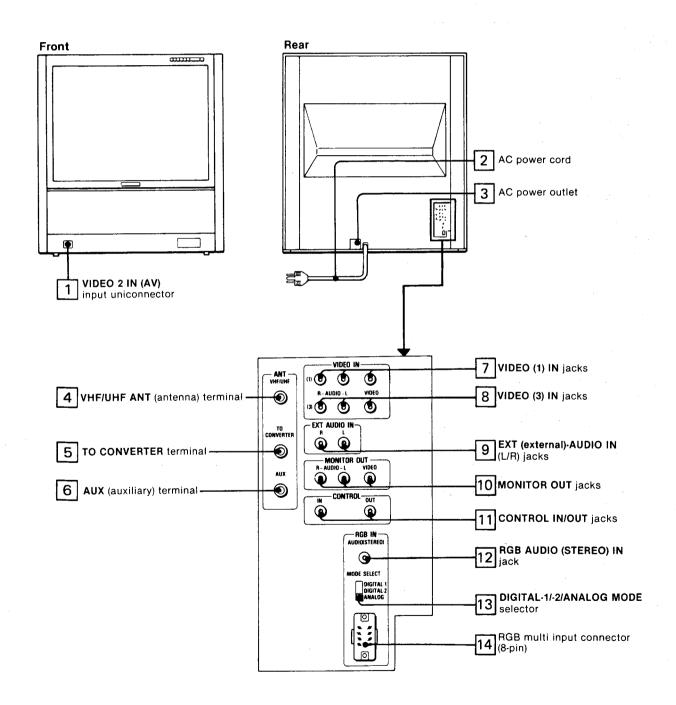
#### Note

You cannot erase a VHF or UHF channel from the memory and retain a cable TV channel which has the same number, or vice versa. If either a VHF/UHF channel or a cable with the same number is to be kept in the memory, do not erase the number.

#### 1-6. APPLICATIONS WITH OTHER OPTIONAL EQUIPMENT

This unit is equipped with various input/output jacks and terminals for your desired equipment to be connected.

For details on the various optional connecting cables to be used, see "OPTIONAL AUDIO/VIDEO CONNECTING CABLES" on page 14.



1 VIDEO 2 IN (input) AV uniconnector (AV jack)

Connect to the video and audio output jacks of a video cassette recorder or microcomputer. Video and audio signals are transmitted simultaneously.

#### 2 AC power cord

3 AC power outlet

This outlet provides AC power of 100W max. to the connected microcomputer, etc.

CAUTION: Do not connect electrical home appliances such as electric irons, fans, or other highwattage equipment to this outlet.

4 VHF/UHF ANT terminal See "ANTENNA/CABLE CONVERTER terminal CONNECTION"

AUX (auxiliary) terminal  $\int$  on page 21.

7 VIDEO (1) IN jacks 8 VIDEO (3) IN jacks

Connect to the video and audio output jacks of a VCR\*, video disc player, etc.

to video output jack VIDEO jack (phono, yellow)

to audio L (left channel) AUDIO L jack output jack (phono, white)

AUDIO R jack to audio R (right channel) (phono, red) output jack

#### 9 EXT AUDIO IN (L/R) jacks

An external audio source can be connected to these jacks to be combined with the picture of the selected TV program. Connect to the audio/line output of the audio source.

To view FM simulcasted programs, see page 20.

#### 10 MONITOR OUTPUT jacks (phono type)

Connect to the video and audio input jacks of a video cassette recorder or color monitor. Either the TV or VCR signal selected by the TV/VIDEO button is supplied.

To record only the sound, connect the audio input jacks of a tape recorder to the AUDIO L and R jacks with a connecting cable such as the optional RK-74A.

The RGB signals are not supplied (and therefore will not be recorded on the connected VCR) from these jacks even when the RGB signals are displayed on the screen.

#### 11 CONTROL IN/OUT jacks (mini type)

These jacks are for connecting a future audio or video product also equipped with similar CONTROL IN or OUT jacks for the expansion of your audio-video system.

#### 12 RGB AUDIO (STEREO) IN jack (stereo mini type)

Connect to the RGB AUDIO output jack of microcomputers etc.

#### 13 DIGITAL-1/-2/ANALOG MODE selector

For computers having intensity output, set to DIGITAL-1.

For computers without intensity output, set to DIGITAL-2.

For computers having analog output, set to ANALOG.

#### Note

Some microcomputers having intensity outputs may not function correctly even if this selector is set to DIGITAL-1. In this case, contact your nearest service facility.

#### 14 RGB multi input connector (8-pin)

This connector allows direct RGB hook-up to a microcomputer having RGB output.

When connecting the microcomputer, use a connecting cable with an 8-pin plug that will match the RGB output of the equipment to the pin assignment of this connector designated on page 2.

<sup>\*</sup>You will achieve better picture and sound quality than by connecting the VCR only to the antenna terminal.

#### 1-7. CONNECTIONS

#### **OPTIONAL AUDIO/VIDEO CONNECTING CABLES**

The optional connecting cables to be used for connecting other equipment depend upon what type of audio and video jacks the equipment you desire to connect has. The following charts will help you choose which cable you should use.

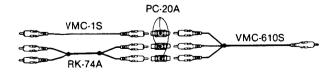
### Cables to be connected to the VIDEO 1 and 3 IN jacks

The type of a video jacks of ment to be contact.	of the equip-	Connecting cable to be used
Video (phono-type)	Audio (L, R) (phono-type)	VMC-2P3
Video (phono-type)	Audio (mini-type) ©	VMC-2MP3
Video (phono-type)	Audio (phono-type)	VMC-609MS

### Cables to be connected to the VIDEO 2 IN (AV type) uniconnector

The type of video jacks of ment to be of	of the equip-	Connecting cable to be used
Video (phono-type)	Audio (L, R) (phono-type)	VMC-610S
Video (phono-type) ⓒ	Audio (phono-type)	*The PC-21 is supplied to the cable for a mini-type audio input.

If you use the connecting cable VMC-610S, extend the cable by using the optional connecting cables VMC-1S and RK-74A with the optional plug adaptors PC-20A (phono → phono).



The following are few examples of the possible connections.

#### Notes on connection

- Before connecting, make sure that the power to each piece of equipment is turned off.
- The plugs should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Match the color when connecting the plugs to the lacks.

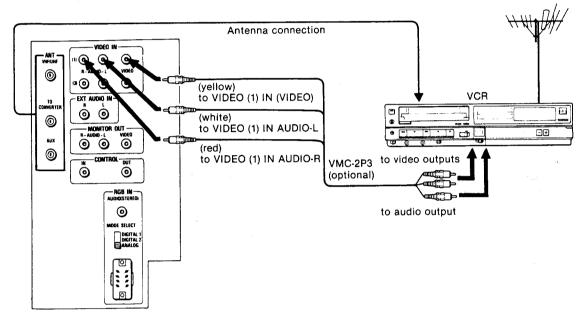
#### **VCR CONNECTION**

Keep the VCR away from the TV, if the display or sound is affected.

#### Connecting VCRs that are capable of receiving TV broadcasts

#### Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.



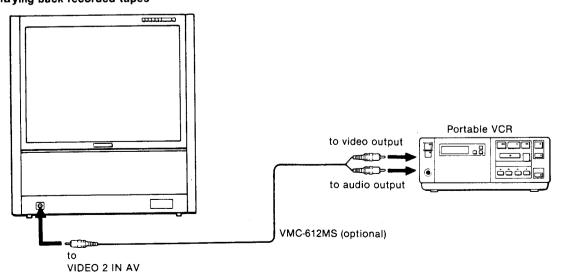
If you desire to connect another VCR, make the similar connection to the VIDEO 3 IN jacks and set VIDEO 3/EXT AUDIO selector to "VIDEO 3".

Connecting portable VCRs (that are not equipped with/connected to a TV tuner)

#### For playing back recorded tapes

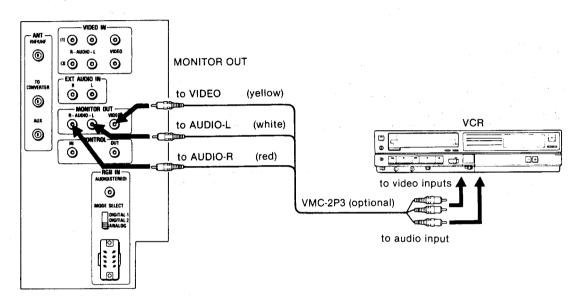
With this connection, you will be able to...

- View the playback of tapes
- Record TV programs
- Record a TV program while viewing another



## Editing tapes by connecting a VCR to the MONITOR OUT jacks

If a VCR is connected to the MONITOR OUT jacks besides another VCR, video disc player, etc., connected to the VIDEO (1/3) jacks or VIDEO 2 IN AV uniconnector, you will be able to edit your own tapes by recording the selected video source (including the TV programs) displayed on the screen. For selecting the desired video source, see page 19.



#### Note

The RGB input from the RGB multi input connector (8-pin) cannot be recorded.

#### MICROCOMPUTER CONNECTION

Using the appropriate connecting cable and with the DIGITAL -1/-2 ANALOG MODE selector of this unit set to the appropriate position, this unit can be used with microcomputers and other equipment having RGB terminals.

In addition, if the equipment to be connected has the RGB audio output jack, connect it to the RGB AUDIO (STEREO) IN jack of the projector.

For details on connection, refer to the instruction manuals of the equipment to be connected.

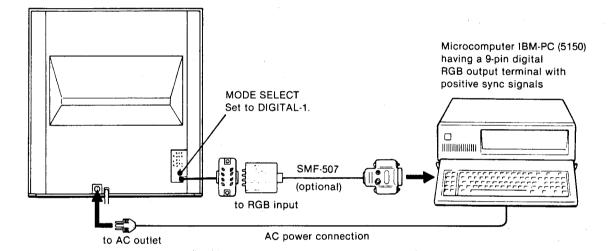
### Examples of connections with microcomputers with digital RGB output

Microcomputers having intensity output

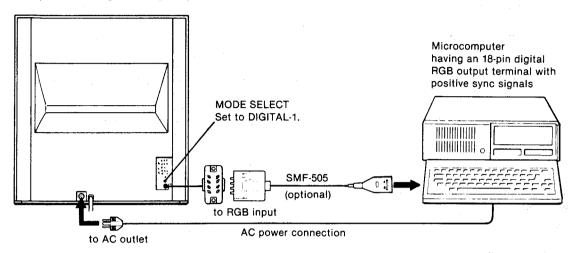
#### Note

According to the microcomputer to be connected, the connecting cable to be used depends upon the type of RGB output jack of the computer. The cable should arrange the output signals of RGB multi input connector (8-pin) of this set (See page 2).

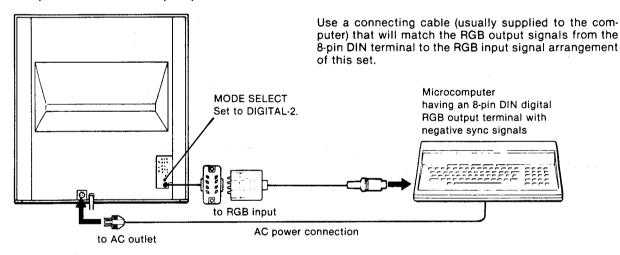
If you are not sure whether you can use your computer with this set or which connecting cable to use, consult your authorized Sony dealer.



#### Microcomputers having intensity output



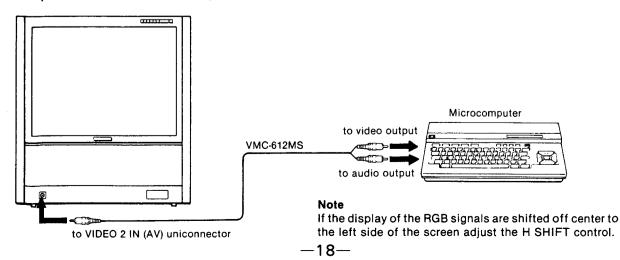
#### Microcomputers without intensity output



#### Notes

- The monitor cable should arrange the RGB output signals of the connected equipment so that they match the signal assignment of the RGB input connector of this set (See page 2). If you are not sure whether you can use your computer etc., with
- this set or which monitor cable to use, consult your authorized Sony dealer.
- Some microcomputers having intensity outputs may not function correctly even if this selector is set to DIGITAL-1. In this case, contact your nearest Sony dealer.

#### Microcomputer with video and audio outputs



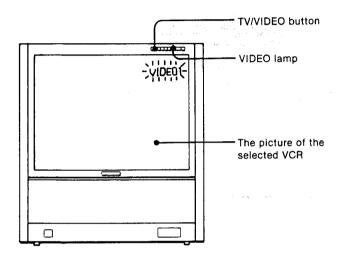
#### 1-8. SELECTING THE VARIOUS AUDIO AND VIDEO SOURCES

# VIEWING THE PICTURE OF THE EQUIPMENT CONNECTED TO THE VIDEO (1/3) IN or VIDEO 2 IN (AV) UNICONNECTOR

(If the "RGB" indication is lit, press RGB button to turn it off.)

Press the TV/VIDEO button until the "VIDEO 1, 2 or 3" indication of the VIDEO input jacks from which desired the signals to come ffrom appears.

The VIDEO lamp will light up.



Every time you press the TV/VIDEO button, the display will change as follows:

Adjust the volume with the VOLUME buttons.

\*Set VIDEO 3/EXT AUDIO selector on the sub control panel to "VIDEO 3" if "EXT-A" appears.

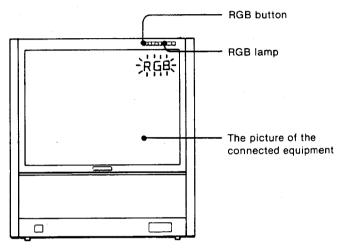
The channel number buttons on the Remote Commander or the CHANNEL scan buttons will not function while the VIDEO lamp is lit.

# TO LISTEN TO THE SOUND OF THE AUDIO SOURCE CONNECTED TO THE EXTERNAL AUDIO JACKS

- 1 Set VIDEO 3/EXT AUDIO selector to "EXT AUDIO".
- 2 Press TV/VIDEO button as many times as necessary until the on-screen "EXT-A" appears.

# VIEWING THE DISPLAY OF THE EQUIPMENT CONNECTED TO THE RGB MULTI INPUT CONNECTOR

Press the RGB button to display the "RGB" indication. The RGB lamp will light up.



To return to the normal TV program or to the picture of the VCR, press RGB again.

To have the indications remain on the screen, press the DISPLAY button on the Remote Commander.

#### Notes

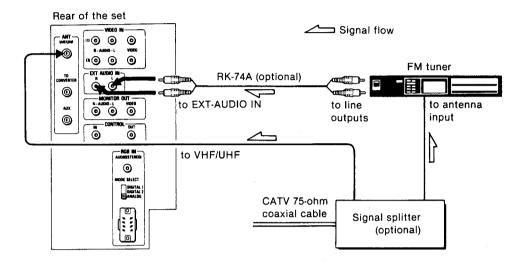
- The HUE, COLOR and SHARP (sharpness) adjustments are non-effective for the displayed RGB input.
   Adjust the picture with the PICTURE buttons or by adjusting the BRIGHT (brightness).
- The selected source is retained even when the power is turned off once.

#### 1-9. ENJOYING FM SIMULCASTED PROGRAMMING

#### Over-the-cable FM simulcasts

Cable TV companies have also started "simulcasting" some channels like MTV (Music Television) and selected movies in stereo over the cable. In the case of cable stereo programs, however, the audio signal is not sent over the air but sent on FM frequencies over the cable.

By splitting the incoming cable signal and running it to both the TV tuner and an FM tuner/receiver, these cable programs can be enjoyed in stereo over the speakers of the projector as shown below.



#### Preparation

Make sure the following are properly set.

- Set VIDEO 3/EXT AUDIO to "EXT AUDIO".
- Press TV/VIDEO button as many times as necessary so that the on-screen "EXT A" indication is displayed.
- On-screen "RGB" indication or RGB lamp should be off.
  - (Press RGB button as necessary so that it goes off.)
- For over-the-cable FM simulcasts, the CABLE ON/OFF button should be ON A, and depending on the channel to be viewed, the on-screen "AUX" indication should be as follows:

(Press ANT/AUX button to change as necessary.)

For regular cable TV channels:

The indication should be off.

For pay cable TV channels:

The indication should be displayed.

#### Operation

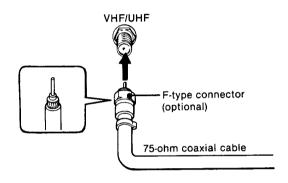
- 1 Set the FM tuner to the frequency designated by the broadcaster.
- 2 Operate the set the same as in usual TV viewing.

#### 1-10. ANTENNA/CABLE CONNECTION

Using an outdoor antenna may be necessary. Cable TV reception is only possible by connecting a cable supplied by your local cable operator.

Prepare the antenna or cable end using the appropriate connector, and connect the antenna or cable to the antenna terminal of the set. (See A. B. C or D below.)

### A Combination VHF/UHF antenna,\* VHF antenna or CATV cable

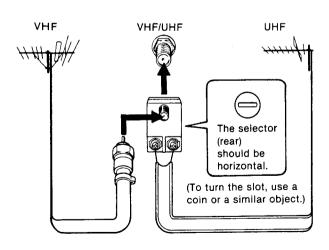


\* Most combination antennas are equipped with a signal splitter. Take off the splitter and attach the proper connector.

#### B When both VHF and UHF antennas are connected

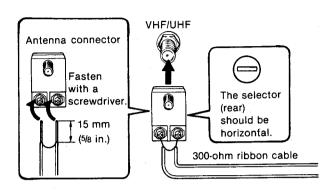
Prepare the VHF antenna end using the appropriate connector as illustrated in **A**.

Attach the supplied antenna connector to the TV antenna terminal, and connect the cables to the connector. (For UHF, see C.)



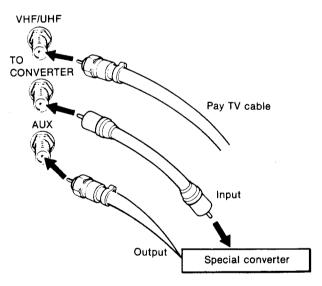
When the cable is connected to the TV in this way, snow and noise may appear in the pictures of the cable TV channels over 37 (W+1).

#### C UHF antenna only



#### D Cable with a special converter (decoder)

Pay cable TV systems use scrambled or encoded signals and require special converters (decoders)\* in addition to the normal cable connection. Connect the converter (decoder) with a 75-ohm coaxial cable (optional).

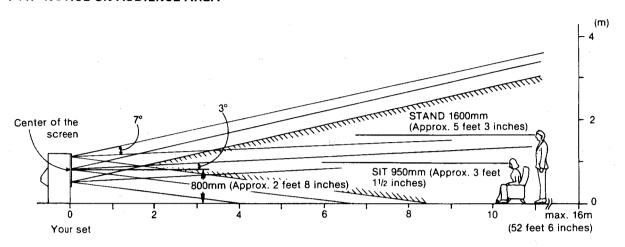


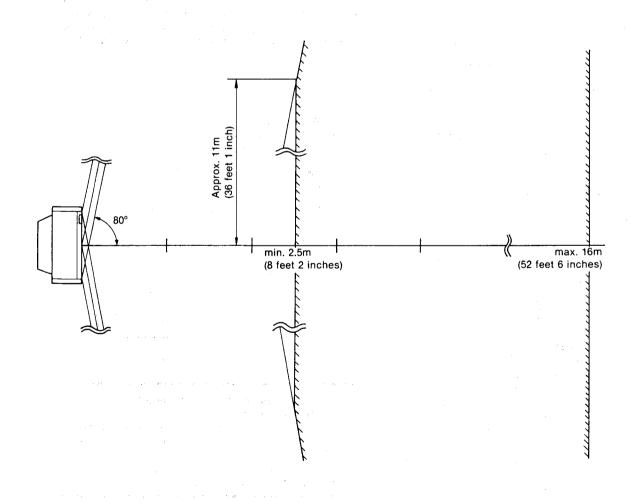
\*The special converter (decoder) will be supplied by the cable company.

#### Note to CATV system installer in the USA:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

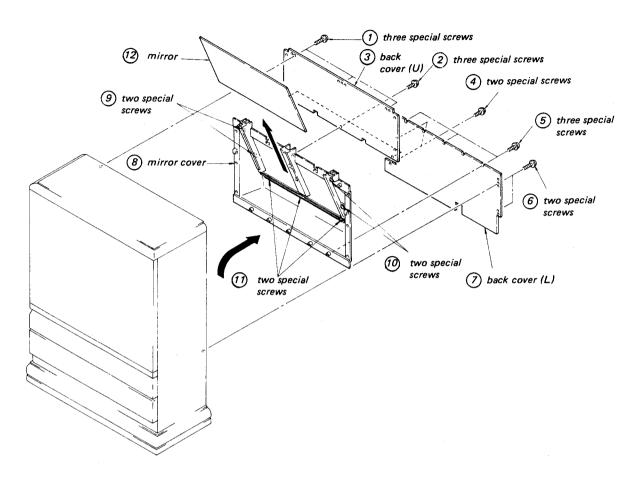
#### 1-11. NOTICE ON AUDIENCE AREA



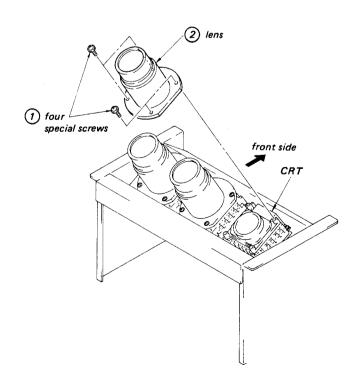


## SECTION 2 DISASSEMBLY AND REPLACEMENT

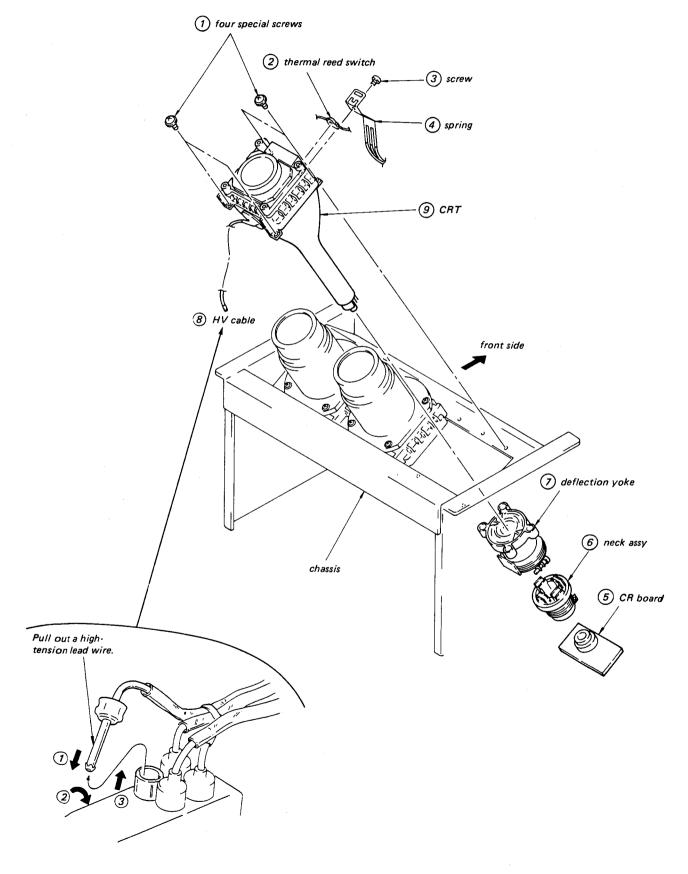
#### 2-1. MIRROR REMOVAL



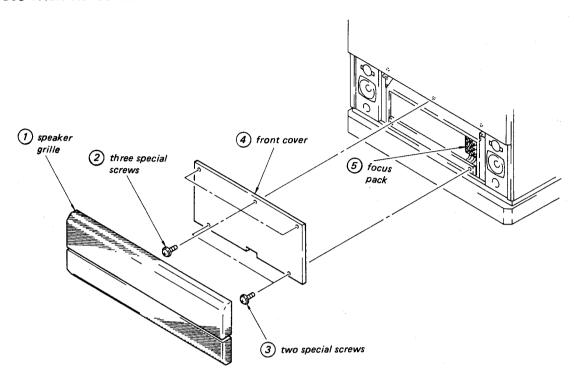
#### 2-2. LENS REMOVAL



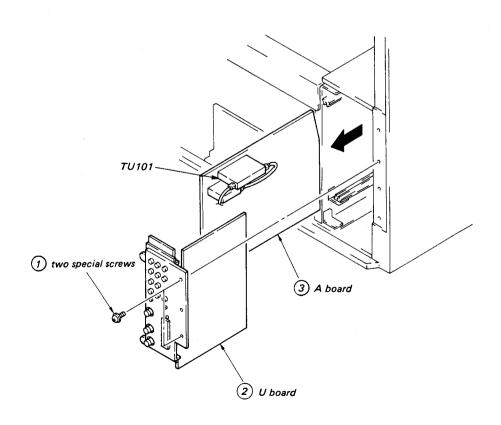
#### 2-3. CRT REMOVAL



#### 2-4. FOCUS PACK ADJUSTMENT



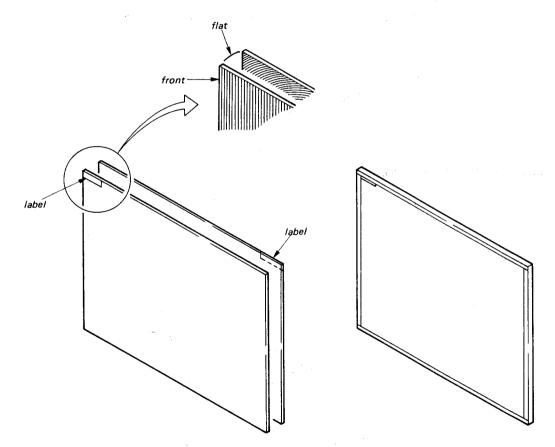
#### 2-5. CHECKING FOR U AND A BOARD UP



#### 2-6. LENS ASSEMBLY METHOD

This set has a lens consisting of two lenses. The front and rear lenses both have face and back sides and top and bottom positions and do not perform properly unless they are assembled correctly. When changing the lenses, read the following carefully and assemble the lenses correctly.

- The lens top and bottom positions can be distinguished by the labels. Assemble the front and rear lenses facing the labels upward.
- The front side has vertical stripes. Face the back side of it with the side, whose surface is coarse, of the rear lens. Tape the four corners of the lenses thoroughly without leaving untaped portions on them using an adhesive tape (Part No. 7-632-663-00). When taping, be sure to align the corners accurately so that no steps are left on the taped sides.



### SECTION 3 **ADJUSTMENTS**

#### 3-1. SETUP ADJUSTMENTS

#### 3-1-1. Adjustment of Defocus Magnet

- 1. Adjustment (blue) of Defocus Fourpoles Magnet
- 1. Receive all white signal.
- 2. Set PICTURE to maximum, and set BRIGHT-NESS to 50%.
- 3. After adjusting the fourpoles magnet as shown in Fig. 1, adjust the Blue Focus VR of the focus pack to have the yellow ring similar to Fig. 2.
- 4. Rotate the fourpoles magnet to the erasing point of the yellow ring. (90° rotation)

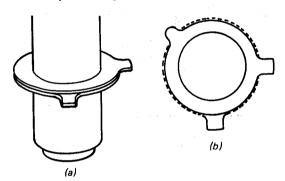
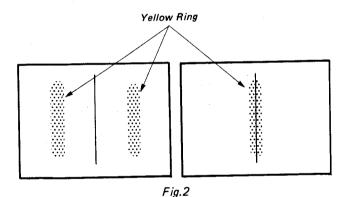


Fig. 1



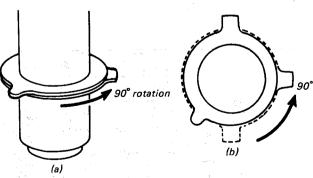
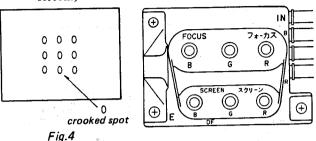


Fig.3

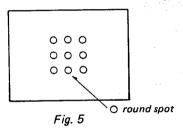
- 2. Adjustment (red, green) of fourpoles magnet spot adjustment
- Dot signal is received. 1.
- Set PICTURE to maximum, and set BRIGHT-NESS to 50%.

3. Rotate the Red Focus VR of the focus pack clockwise, and defocus the SPOT as shown in Fig. 4. (So it stands out in the center of the screen.)



4. Make the SPOT round by adjusting the fourpoles magnet for SPOT adjustment. (See Fig. 5.)

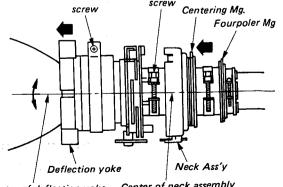
Note: Adjust the fourpoles magnet by closing and opening the upper and lower magnet layers while rotating it left and right to make the SPOT round.



- After the SPOT becomes round, adjust the Red Focus VR of the focus pack to Just.
- For green, repeat steps 3 to 5 in the same way.
- Do paint lock.

#### 3-1-2. FOCUS ADJUSTMENT

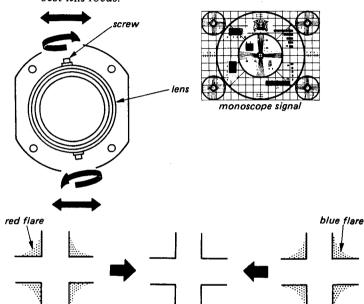
- 1. Check that VR of the D Board (registration adjustment) and VR (CENT) are at the mechanical center.
- 2. Rotate H. SHIFT VR (RV6005) on the D board to adjust the LEFT maximum.
- Set the centering Mg mounted on the neck ass'y (RGB) to 0 magnetic field. (See Fig. 6.)
- 1) Slide deflection yoke forward as far as it will go.
  - Side neck assembly to touch the deflection yoke.



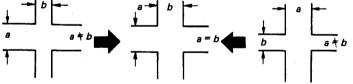
Center of neck assembly Center of deflection yoke

Fig. 6

- 3. Input a monoscope signal and make rough adjustment of WB at BRT 50% and PIX 0%.
- Set BRT and PIX maximum and change the NOR/TEST switch to TEST and HATCH/BAR select switch to HATCH to show cross hatch.
- 5. Cover a lens cap on the red and blue lenses and project green only.
- Rotate the green lens and adjust to obtain the best lens focus.



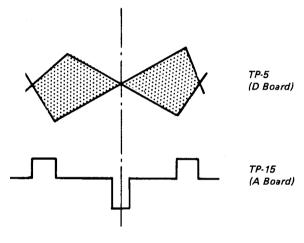
7. Rotate the GREEN FOCUS VR of the focus pack and adjust to obtain the best electric focus.



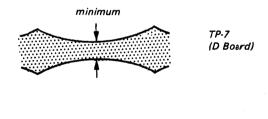
- 8. Repeat Steps 6. and 7, track, then adjust to obtain the best focus.
- 9. Tighten the green lens screw and fix the lens.
- 10. Adjust the red and blue focuses similarly.

#### 3-1-3. REGISTRATION INITIAL SETTING

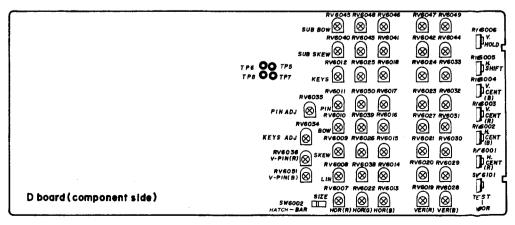
- 1. Set the NOR/TEST switch to TEST and HATCH /BAR switch to BAR (on the D board).
- Connect an oscilloscope to TP-5 (key waveform) on the D Board and to TP-15 (G-OUT) on the A Board.
- Rotate RV6034 on the D Board to adjust the centers of the KEY and G-OUT waveforms to match.



. Connect the oscilloscope to TP-7 (H, pin) on the D Board and adjust RV6035 to minimize the amplitude at the center of the waveform.



5. RV6034 and RV6035 absolute should not be rotated hereafter.



### 3-1-4. GREEN PICTURE ADJUSTMENT

- 1. Input a monoscope signal.
- 2. Cover a lens cap on the red and blue lenses and project green only.
- 3. Adjust the green deflection yoke to make the monoscope horizontal center line horizontal, then fix the deflection yoke. Adjust the green neck ass'y to obtain a match with the green deflection yoke center and fix it. (See Fig. 7.)
  - (1) Slide deflection yoke forward as far as it will go.
    - Side neck assembly to touch the deflection yoke.

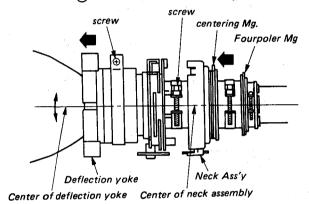
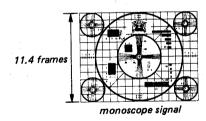
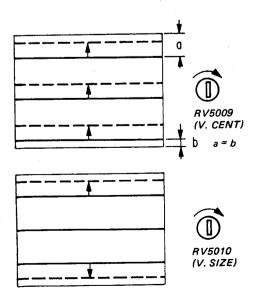
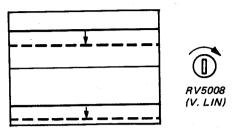


Fig. 7

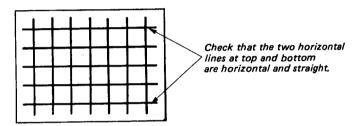
4. Rotate RV5008 (V LIN) on the E Board to obtain the best linearity in the V direction. Rotate RV5010 (V SIZE) to adjust the V size to 11.4 frames and rotate RV5009 (V CENT) to adjust the V center to the screen center.



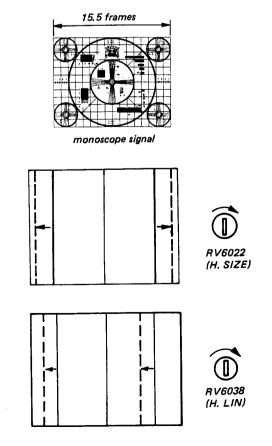




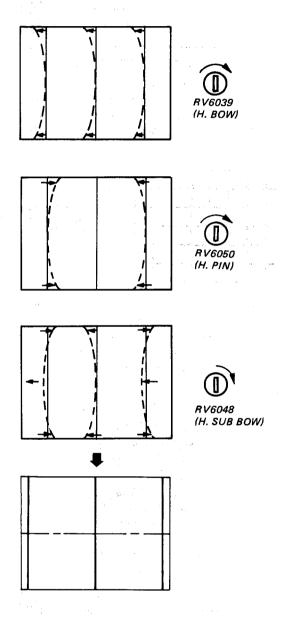
5. Check that the horizontal lines at the top and bottom edges of the monoscope hatch are horizontal and straight. (Adjust any distortion with the pin correction Mg mounted on the deflection yoke.)



6. Rotate RV6038 (H LIN G) on the D Board to obtain the best linearity in the H direction, rotate RV6022 (H SIZE) to adjust the H size to 15.5 frames, then match the H center to the screen with the Centering Mg of G DY.



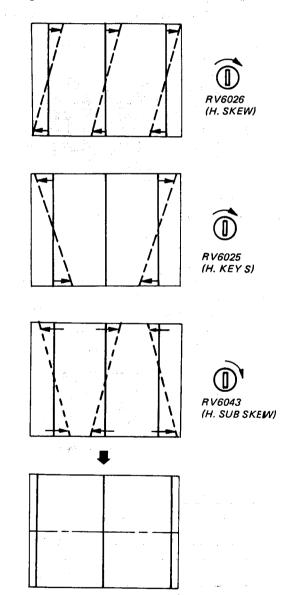
 Set the NOR/TEST selector switch to TEST and HATCH/BAR selector switch to HATCH. Rotate RV6039 (H BOW G), RV6050 (H PIN G), and RV6048 (H SUB BOW G) to adjust as shown below.



8. Correct tilting of the vertical center line using RV6026 (H SKEW G) and make the line perpendicular.

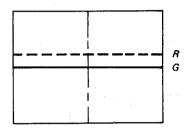
Rotate RV6025 (H KEYS G) to correct the tilting at both left and right edges to be in the same direction and in the same quantity. Rotate RV6043 (H SUB SKEW G) to correct the tilting of the left, right, and center vertical lines to be in the same direction and same quantity.

Rerotate RV6026 (H SKEW G) to eliminate tilting of all the vertical lines.

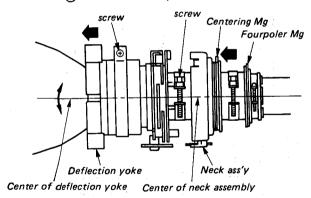


#### 3-1-5. GREEN AND RED VERTICAL REGISTRATION

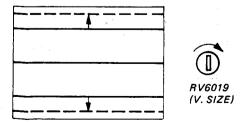
- 1. Cover a lens cap on the blue lens and receive a monoscope signal.
- 2. Operate the CENT MG of the red DY to match the red monoscope center nearly to the center of the green monoscope.
- 3. Set the NOR/TEST select switch to TEST and HATCH/BAR to HATCH, rotate the red DY so that the horizontal center lines of grenn and red match, then fix the red DY.



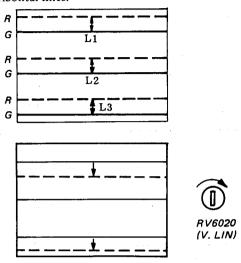
- 4. Align the red neck ass'y center to the red DY center and fix.
- 1) Slide deflection yoke forward as far as it will go.
  - 2) Side neck assembly to touch the deflection yoke.



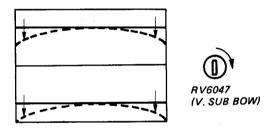
5. Rotate RV6019 (V SIZE R) on the D Board to slightly reduce the vertical width of the picture.



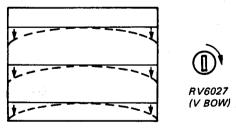
6. Rotate RV6020 (V LINE R) on the D Board to equalize the slip quantities of the red and green horizontal lines.



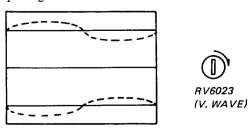
- 7. Align the red and green horizontal lines with the Centering Mg.
- 8. Rotate RV6047 (V SUB BOW R) on the D Board to adjust the red horizontal lines in the same direction and quantity relative to the green horizontal lines. (Top and bottom edges.)



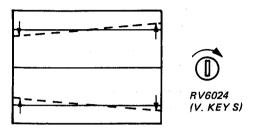
 Rotate RV6027 (V BOW R) on the D Board to overlap the green and red horizontal lines.



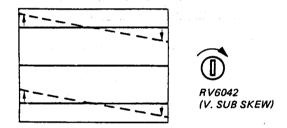
10) Rotate RV6023 (V WAVE R) on the D Board to overlap the green and red horizontal lines.



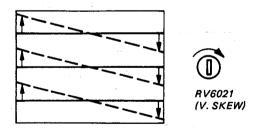
11. Rotate RV6024 (V KEY S R) on the D Board to adjust tilting of the red horizontal lines relative to the green horizontal lines at the top and bottom edges.



12. Rotate RV6042 (V SUB SKEW R) to equalize the tilting of the red horizontal lines relative to the green horizontal lines in top, bottom, and center.



13. Rotate RV6021 (V SKEW R) to make the red horizontal lines parallel to the green horizontal lines.

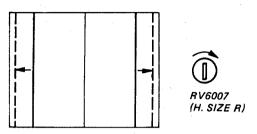


14. Repeat Steps 5, 6, and 7.

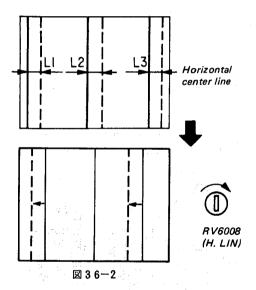
If the horizontal lines at the top and bottom edges do not align after trying, make a fine adjustment using the pin correction Mg mounted on the red DY.

#### 3-1-6. GREEN AND RED HORIZONTAL REGISTRATION

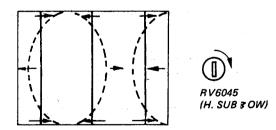
1. Rotate RV6007 (H SIZE R) to slightly reduce the left and right widths of the picture.



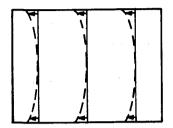
2. Rotate RV6008 (H LINE R) to equalize the slip quantities of the red ang green vertical lines.



- 3. Align the red and green vertical lines using Centering Mg (R).
- 4. Rotate RV6045 (H SUB BOW R) to equalize the directions and quantities of the green and red vertical lines.

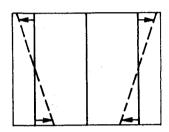


5. Rotate RV6010 (H BOW R) to overlap the green and red horizontal lines.



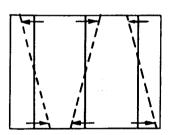


6. Rotate RV6012 (H KEYS R) to adjust tilting of the red vertical lines relative to the green vertical lines at left and right edges.



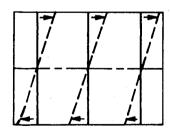


7. Rotate RV6040 (H SUB SKEW R) to adjust tilting of the red vertical lines relative to green vertical lines at left, right, and center.



RV6040 (H. SUB SKEW)

8. Rotate RV6009 (H SKEW R) to make the red and green vertical lines parallel.

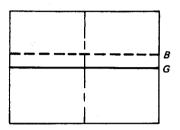




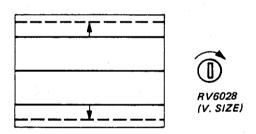
9. Repeat Steps 1, 2 and 3.

#### 3-1-7. GREEN AND BLUE VERTICAL REGISTRATION

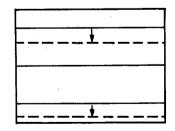
- 1) Cover a lens cap on the red lens and receive a monoscope signal.
- 2) Rotate the blue DY. Centering Mg to align the blue monoscope center nearly to the green monoscope center.



- 3) Set the NOR/TEST selector switch to TEST and HATCH/BAR switch to HATCH, rotate the blue DY to align the horizontal center lines of green and blue, then fix the blue DY.
- 4) Align the blue neck ass'y center to the blue DY center and fix them.
- 5) Rotate RV6028 (V SIZE B) to slightly reduce the widths at top and bottom of the picture.

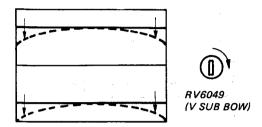


6) Rotate RV6029 (V LINE B) to equalize the slip quantities of the blue and green horizontal lines.

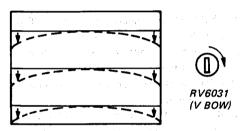




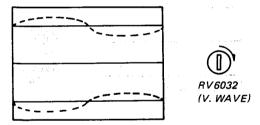
- 7) Rotate the Centering Mg (B) to align the blue and green horizontal lines.
- 8) Rotate RV6049 (V SUB BOW B) to make the directions and quantities of the blue and green horizontal lines equal.



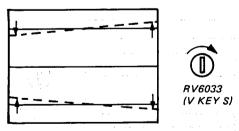
 Rotate RV6031 (V BOW B) to overlap the green and blue horizontal lines.



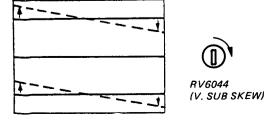
10) Rotate R6032 (V WAVE B) on the D Board to overlap the green and red Horizontal lines.



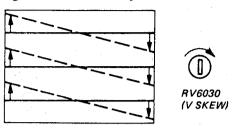
11) Rotate RV6033 (V KEYS B) to adjust tilting of the blue horizontal lines relative to the green horizontal lines at top and bottom.



12) Rotate RV6044 (V SUB SKEW B) to equalize tilting of the blue horizontal lines relative to the top, bottom, and center green horizontal lines.



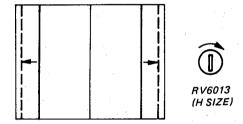
13) Rotate RV6030 (V SKEW B) to make the blue and green horizontal lines parallel.



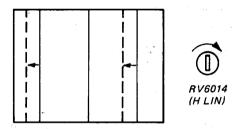
14) Repeat 5), 6), and 7).

#### 3-1-8. GREEN AND BLUE VERTICAL REGISTRATION

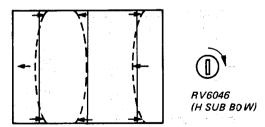
1) Rotate RV6013 (H SIZE B) and slightly reduce the left and right widths of the pictures.



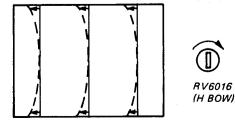
2) Rotate RV6014 (H LIN B) to equalize the slip quantities of the blue and green vertical lines.



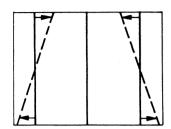
- 3) Align the blue and green vertical lines using the Centering Mg (B).
- 4) Rotate RV6046 (H SUB BOW B) to equalize directions and quantities of the green and blue vertical lines.



 Rotate RV6016 (H BOW B) to overlap and green and blue horizontal lines.

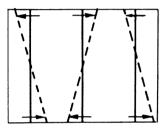


6) Rotate RV6018 (H KEYS B) to adjust tilting of the blue vertical lines relative to the green vertical lines at the left and right edges.



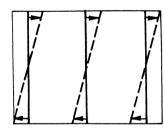


7) Adjust tilting of the blue vertical lines relative to the left, right, and center green vertical lines by rotating RV6041 (H SUB SKEW B).





8) Rotate RV6015 (H SKEW B) to make blue and green vertical lines paralles.





9) Repeat Steps 1, 2 and 3.

#### 3-2. CIRCUIT ADJUSTMENTS

#### (1) TEST EQUIPMENT REQUIRED

- 1. Variable auto-transformer
- 2. Isolation transformer
- 3. Electrostatic voltmeter

Digital multimeter

(Capable of measuring voltage more than 1,100V). 4. Frequency counter

- 5. Color-bar/pattern generator
- 6. AF generator
- 7. Oscilloscope

#### (2) INPUT SIGNAL

When making these adjustments supply a white pattern, a color-bar or an off-air signal.

#### (3) CONTROLS AND SWITCHES SETTING

Controls and switches should be set as follows when making checks and adjustments unless otherwise noted.

PICTURE control BRIGHT control COLOR control HUE control

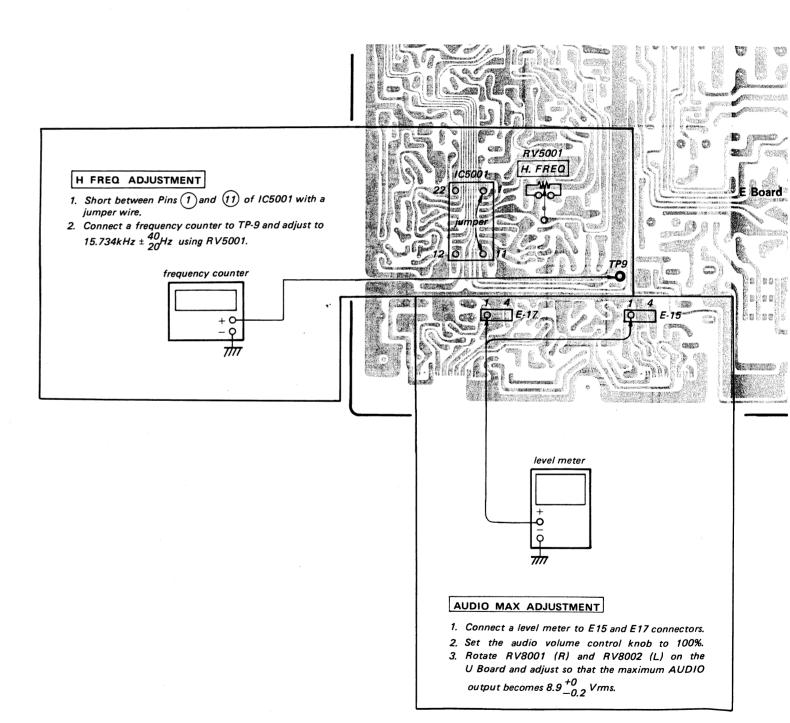
Set for best picture.

V HOLD control

TEST/NORMAL switch . . . . . NORMAL

(4) These adjustments should be performed with the rated power supply voltage unless otherwise noted.

#### 3-2-1. E BOARD ADJUSTMENTS



#### 3-2-1. E BOARD ADJUSTMENTS

1,100V).

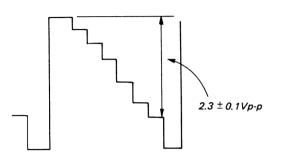
se noted.

: pattern, digital multimeter ws when RV5001 H. FREQ H FREQ ADJUSTMENT E Board 1. Short between Pins 1 and 11 of IC5001 with a +B ADJUSTMENT 2. Connect a frequency counter to TP-9 and adjust to 15.734kHz ± 20Hz using RV5001. the rated 1. Connect a digital multimeter to TP-3. 2. Check that the voltage value is  $135 \pm 1V$  dc. frequency counter .... level meter AUDIO MAX ADJUSTMENT 1. Connect a level meter to E15 and E17 connectors. 2. Set the audio volume control knob to 100%. 3. Rotate RV8001 (R) and RV8002 (L) on the U Board and adjust so that the maximum AUDIO output becomes  $8.9^{+0}_{-0.2}$  Vrms.

# 3-2-2. A BOARD ADJUSTMENTS

# SUB CONTRAST ADJUSTMENT

- 1. Input a color bar signal.
- 2. Set PICTURE control to maximum and COLOR control to minimum.
- 3. Connect the oscilloscope (E) to Pin (1) of IC401.
- 4. Rotate RV302 to adjust the waveform of Pin (17) of IC401 as shown in the diagram.

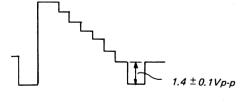


# 14.3MHz ADJUSTMENT

- 1. Receive a color bar signal.
- 2. Set HUE, COLOR, and PIC controls to 80%.
- 3. Connect Pin 30 of IC301 to the ground through
- 4. Connnect Pin (38) of IC301 to the +12V line through a  $10k\Omega$  resistor.
- 5. Short Pins (15) ands (16) of IC301.
- 6. Connnect a frequency counter to Pin (32) of IC301 and adjust to 3.579kHz ± 40Hz with CV316.

# SUB BRT, G BIAS, AND R BIAS ADJUSTMENT

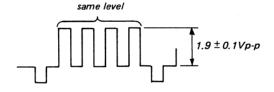
- 1. Input a color bar signal.
- 2. Set the PICTURE control switch to maximum, COLOR control switch to minimum, and BRIGHT-NESS control switch to 50%.
- Connect the oscilloscope C to Pin 1 of IC401.
   Rotate RV406 (SUB BRT) to adjust the pedestal level of Pin (17) of IC401 to 1.4  $\pm$  0.1V.



5. Connect the oscilloscope (C) to Pin (5) of IC401 and rotate RV408 (R BIAS) to adjust the pedestal level of the pin to the same value as that pf the Q419 emitter (oscilloscope D).

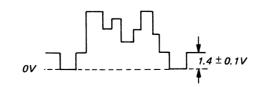
# HUE CENT AND ACC ADJUSTMENT

- 1. Input a color bar signal.
- 2. Reset HUE and COLOR control and set PICTURE control to maximum.
- 3. Connect the oscilloscope (B) to Pin (17) of IC401.
- 4. Rotate RV304 (ACC) and RV303 (HUE) to adjust the waveform of Pin (17) of IC401 as shown in
- 5. Check that the fourth pulse of the BLUE output is  $1.9 \pm 0.1 Vp-p$ .



# R. G. B PEDESTAL LEVEL ADJUSTMENT

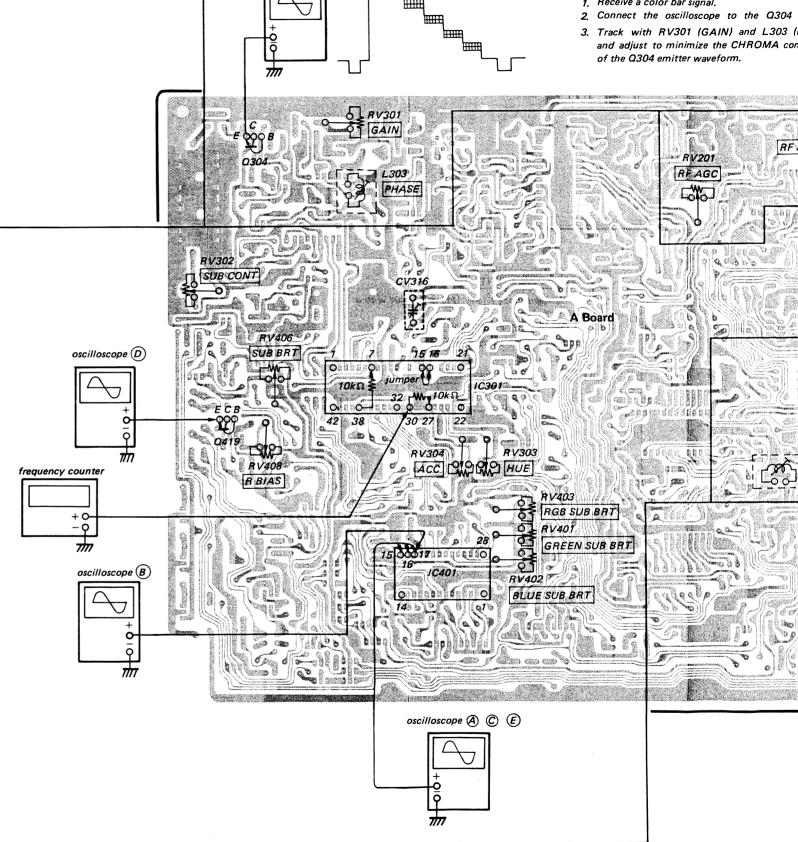
- 1. Input analog R. G. B signal.
- 2. Set the mode to the R. G. B mode.
- 3. Connect the oscilloscope (A) to Pin (15) of IC401 and set the pedestal level to 1.4 ± 0.1V with R V403.
- 4. Connect the oscilloscope (A) to Pin (6) of IC401 and set the pedestal, leve to 1.4 ± 0.1V with
- 5. Connect the oscilloscope (A) to Pin (17) of IC401 and set the pedestal level to 1.4 ± 0.1V with RV402.

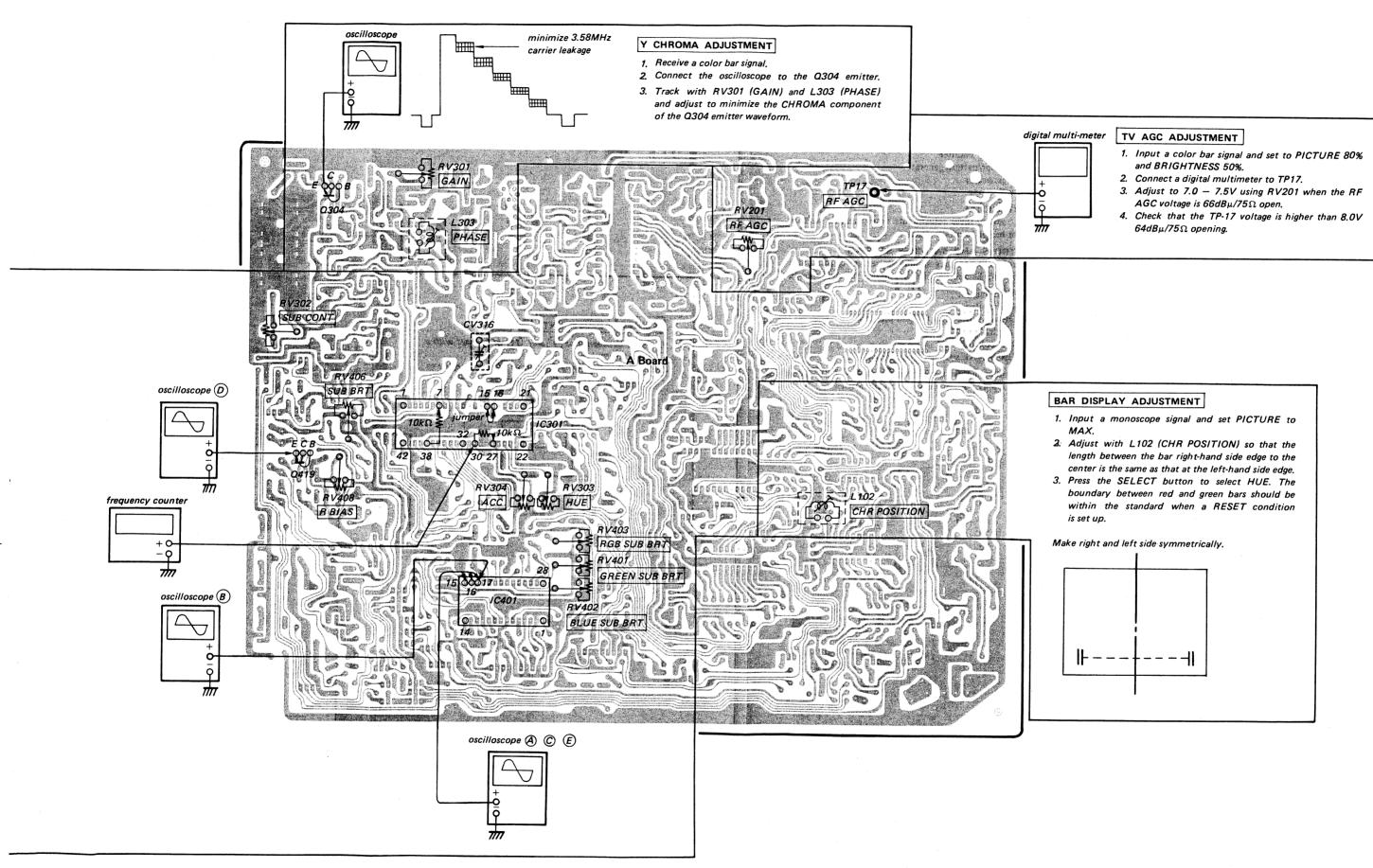


## minimize 3.58MHz Y CHROMA ADJUSTMENT

carrier leakage

- 1. Receive a color bar signal.
- and adjust to minimize the CHROMA con of the Q304 emitter waveform.





# 3-2-3. U BOARD ADJUSTMENTS

# 1. SIGNAL SET UP

Input the following input signals:

V MAIN: MAIN CH - 400Hz, 0.7Vp-p

V SUB : SUB CH - 400Hz sine wave and select the SUB CH mode of the

USA MTS encorder.

V SAP : SAP CH -400Hz sine wave and select

> the SAP CH mode of the USA MTS encoder.

VSAP level is 0.42[Vp-p]

VST : STEREO PILOT signal

Select the stereo pilot output mode of

the USA MTS encoder. V<sub>ST</sub> level 0.14Vp-p

# 2. INPUT SIGNAL CONFIRMATION

- 1. Input a V<sub>MAIN</sub> signal to Pin 1 of Connector
- 2. Check that the voltage at Pin 1 of IC8810 is 0.7Vp-p this time.

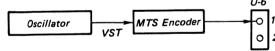
# 3. AUTO STEREO MODE

Lower the voltage at Pin (1) of Connector U-15 to the ground level (Set up the AUTO STEREO MODE when adjusting USA MTS DECODE.)



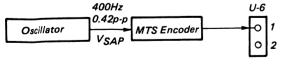
- 1. Input a V<sub>ST</sub> signal to Pin 1 of Connector U-6.
- 2. Connect the oscilloscope (D) to Pin (40) of IC8810 and rotate RV8817 (PILOT CANCEL) to minimize

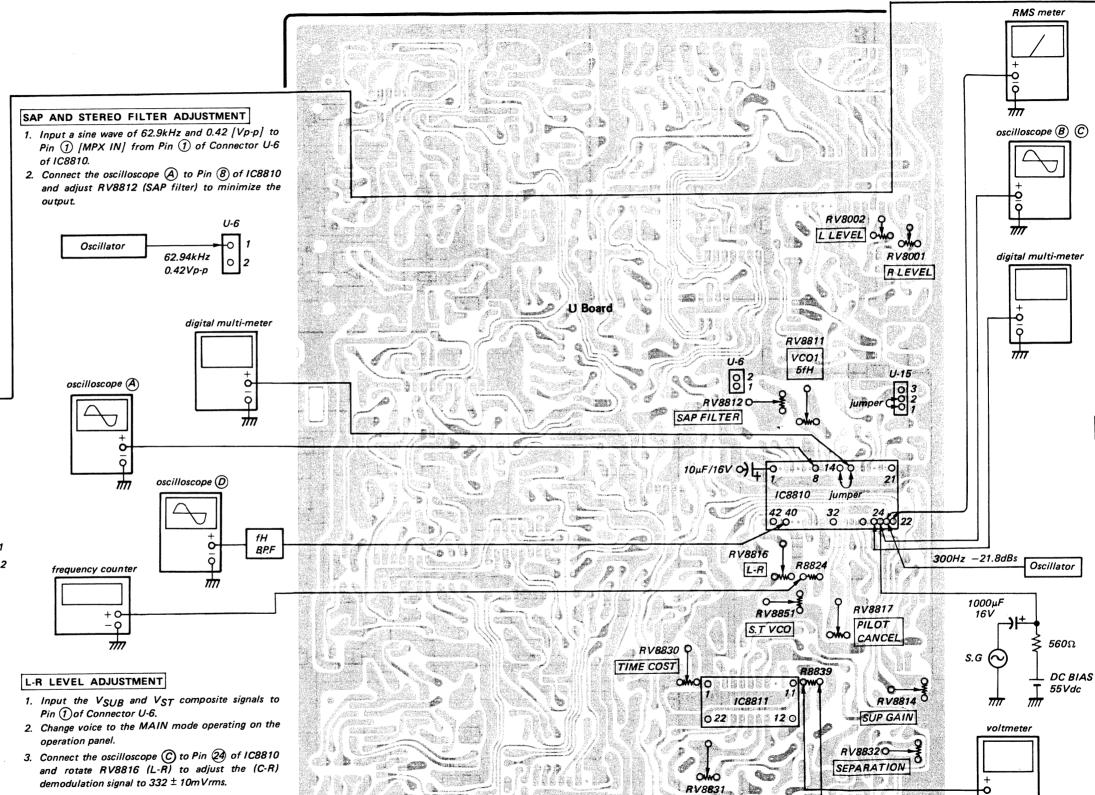
Check that the ST LED is lit this time. \* BPF is needed to 40 pin output.



# SAP LEVEL ADJUSTMENT

- 1. Input a V<sub>SAP</sub> signal to Pin 1 of Connector U-6.
- 2. Change voice to the SAP mode operating on the oneration panel.
- 3. Connect the oscilloscope (B) to Pin (24) of IC8810 and rotate RV8814 (SAP GAIN) to adjust the waveform to 332 ± 10m Vrms.





- 1. Input a sine wave of 78.6 to Pin (1) of IC8810 fr
- 2. Change the voltage at Pi Check that the voltage a  $3.4 \pm 0.3V$  dc this time.
- 3. Lower the voltage at Pin ground level. Rotate RV at Pin (25) of IC8810 be

Oscillator

# SEPARATION ADJUSTME

- 1. Input VMAIN to Pin (1) 2. Change voice to the MA
- operation panel. 3. Check that the level a
- $480 \pm 25 \ [mVrms]$ .
- 4. Check that the level at ±50 [mVrms].

- 5. Input a VST signal to I 6. Apply a sine wave of Pin (24) of IC8810. Rot

this time. Oscillator

level of Pin (23) of IC

# NOISE REDUCTION ADJ

1. Connect a voltmeter to R8839 connected to P rotate RV8830 to adjus of the resistor to be 15.0

# VARIABLE DE-EMPHASI

- 1. Set F3 V8831 (VD ADJ) IOII) to the mechanical of
- 2. Form a circuit as shown a sine wave of 300Hz, -2 Meisure the level at Pin (record as V1) and check < | el of Pin (27) < -18
- 3. Chin ge the signal of 2) to Messure the level of Pin (relord as V2) and rot to adjust to obtain th

 $V2 = V1 - 11.3 \pm 0.3$ 

# STERIO VCO ADJUSTMI

- 1. Compect an chemical of twen Pin 1 of IC8810
- 2. Correct a frequency co RV8851 and rotate RV to 2.94 ± 0.1kHz.

Oscillator

MTS Encoder

# SAP VCO ADJUSTMENT

RMS meter

illoscope (B) (C)

ital multi-meter

Oscillator

**≶ 560**Ω

DC BIAS

55Vdc

1. Input a sine wave of 78.67 [kHz] and 0.42 [Vp-p] to Pin 1 of IC8810 from Pin 1 of Connector U-6.

2. Change the voltage at Pin 14 of IC8810 to 9V. Check that the voltage at Pin 25 of IC8810 is 3.4 ± 0.3V dc this time.

3. Lower the voltage at Pin 14 of IC8810 to the ground level. Rotate RV8811 to adjust the voltage at Pin 25 of IC8810 becomes 3.4 ± 0.4V dc this time.



### SEPARATION ADJUSTMENT

1. Input V<sub>MAIN</sub> to Pin (1) of Connector U-6.

Change voice to the MAIN mode operating on the operation panel.

3. Check that the level at Pin 23 of IC8810 is 480 ± 25 [mVrms].

4. Check that the level at Pin (22) of IC8810 is 480 ± 50 [mVrms].

5. Input a V<sub>ST</sub> signal to Pin 1 of Connector U-6.

6. Apply a sine wave of 300Hz and -21.8dBs to Pin 24 of IC8810. Rotate RV8832 to adjust the level of Pin 23 of IC8810 to 120 ± 9.3 mVrms this time.



# NOISE REDUCTION ADJUSTMENT

1. Connect a voltmeter to both ends of the resistor R8839 connected to Pin (13) of IC8811 and rotate RV8830 to adjust the voltage at both ends of the resistor to be 15.0  $\pm$  1.0 mVdc.

# VARIABLE DE-EMPHASIS ADJUSTMENT

1. Set RV8831 (VD ADJ) and RV8832 (SEPARAT-ION) to the mechanical center.

2. Form a circuit as shown in the diagram and input a sine wave of 300Hz, -24.3dBs.

Measure the level at Pin 27 of IC8810 this time (record as V1) and check that the level is -24dBs

< level of Pin (27) < -18dBs.</p>
3. Change the signal of 2) to 8kHz, -17.2dBs.
Measure the level of Pin (27) of IC8810 this time (record as V2) and rotate RV8831 (V. D ADJ) to adjust to obtain the following relationship:

 $V2 = V1 - 11.3 \pm 0.3$  [dBs]

# STEREO VCO ADJUSTMENT

Connect an chemical capacitor (10μF/16V) between Pin (1) of IC8810 and ground.

2. Connect a frequency counter between R8824 and RV8851 and rotate RV8851 (ST VCO) to adjust to 62.94 ± 0.1kHz.

# 3-2-4. SAFETY RELATED ADJUSTMENTS

When replacing the following components, make the HV. adjustments.

E hoard complete

Deflection yoke Switching regulator FBT (T4)

L5004, L5005, L5010, C5037 C5038, C5039, C5058, C5059 C5060, C5064, C5119, R5066, R5096

When replacing the following components, make the HV, HOLD DOWN adjustments.

HV BLOCK

E board complete

IC5001, Q5001, D5002, R5216 R5217, R5218, R5219, R5220

R5221, R5297, R5020, R5021 in E board R5022, R5024, R5027

# +B MAX CHECK

Replace the SW. REG. confirm +B voltage.

If this not satisfied change the SW. REG.

1. Supply 130V ac to with variable auto-transformer.

2. Feed in a dot signal.

Connect the digital multimeter to C56 plus side and set the power switch to ON.

1. Set the PICTURE and BRIGHTNESS control at

Confirm the voltage on digital multimeter is less than 136V dc.

# Pull out a high-tension lead wire connected to CRT.

# (1) When a high tension meter is available.

# HV ADJUSTMENT ( € C5119)

Confirm that the POWER switch is in OFF position.

 Connect the positive lead of the high tension meter to the HV Block and negative lead to the gound lug beside the heat sink.

3. Disconnect the A-2 connector on the A board and install the tool shown in the figure. Connect a DC ammeter (3mA range) with the A board side connected to plus (+) side.

 Feed in a dot pattern from a color-bar/pattern generator and supply 120V ac to with variable auto-transformer.

5. Disconnect A-21, A-22 and A-23 connector from A board.

Turn the POWER to ON and confirm the raster disappears.

 Confirm that there is less than 33.90 kV on high tension meter.
 Turn the POWER switch to OFF and connect

the A-21, A-22 and A-23 of A board.

9. Turn the POWER switch to ON and feed in a

monoscope pattern.

10. Adjust the PICTURE and BRIGHT control so

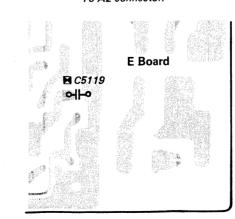
that I<sub>ABL</sub> 1550 ± 100µA.

11. Confirm that there is less than 32-10 kV on high tension meter.

12. If necessary, select C5119 and repeat above steps.

13. Turn the POWER switch to OFF.

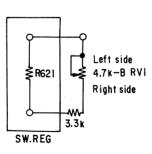
# (2) To A board. A

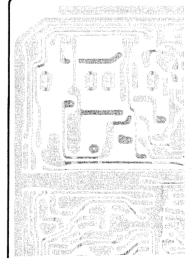


### HV HOLD DOWN ADJUSTMENT ( R5217, R5218)

- Confirm that the POWER switch is in OFF position.
- Connect the positive lead of the high tension meter to the HV Block and negative lead to the ground lug beside the heat sink.
- 3. Mount ceramic capacitor (470pF) to C5119 of E board.
- 4. Disconnect A-21, A-22 and A-23 connector of A board.
- 5. Remove the SW. REG and take off G board.
- 6. Remove R620 and R621 of G board.
- 7. Install the tool shown in the figure.
- 8. Disconnect the A-2 connector on the A board and install the tool shown in the figure. Connect a DC ammeter (3mA range) with the A board side connected to plus (+) side.
- Feed in a dot pattern from a color-bar/pattern generator.
- Supply 120V ac to with variable auto-transformer.
- 11. Turn the POWER switch to ON.
- 12. Adjust RV1, so that HV HOLD DOWN circuit operate.
- 13. Confirm that the POWER is automatically turned off just when the voltage on the high tension meter is less than 34.65kV (When the raster disappears) if this not satisfied select the 

   R5217 and R5218.
- 14. Turn the POWER switch to OFF and feed in a monoscope pattern.
- Turn RV1 to counterclockwise and connect A-21, A-22 and A-23 connector for A board.
- 16. Turn the POWER switch to ON and set the PICTURE and BRIGHT control at max.
- Adjust RV1 so that HV HOLD DOWN circuit operate.
- 18. Confirm that there is less than 33.10kV and  $I_{ABL}$  is 1650  $\pm$  100 $\mu$ A.
- 19. Turn the POWER switch to OFF.
- 20. Disconnect the high tension meter and DC ammeter.
- 21. Remove the tool and mount R620 and R621.





(2) When a high tension meter is not avail

# HV ADJUSTMENT ( ☐ C5119)

- 1. Check if the POWER SW in OFF.
- 2. Mount the 680pF/2 kV ceramic capacitor of E board's C5119

If the capacitor is already mounted on C5119, mount the 680pF/2 kV ceramic cpa in parallel with the C5119.

# HV HOLD DOWN ADJUSTMENT ( ☐ R5217, R5218, C5119)

- Open the front registration panel, and set NOR/TEST selector to TEST. The built-in pattern will then be received.
- 2. Set the user's control to RESET, and set TURE to 80%.
- Check if the synchronization of the screen play is normal. If the synchronization is adjust by the RV5001 on the E board.
- The resistance of the E board's R5217 R5218 increases steadily and the HV HO DOWN circuit operates. Select the resist which clears the screen display.
- Mount two 680pF/2 kV ceramic capacitor parallel with the E board's C5119.
   If it cannot be mounted normally, mount i the back of the board.



# FETY RELATED ADJUSTMENTS

icing the following components, make istments. nolete

205. L.5010. C5037 in E board 739, C5058, C5059 764, C5119, R5066, R5096

icing the following components, make LD DOWN adjustments.

001, D5002, R5216 ?18. R5219. R5220 ?97, R5020, R5021

≀gulator

in E board

# HECK

: SW. REG. confirm +B voltage. satisfied change the SW. REG.

y 130V ac to with variable auto-trans-

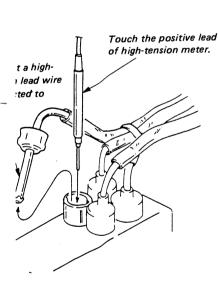
n a dot signal.

124, R5027

ct the digital multimeter to C56 plus side t the power switch to ON.

e PICTURE and BRIGHTNESS control at

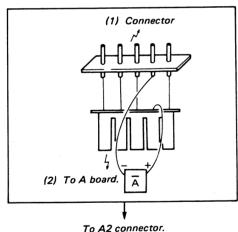
m the voltage on digital multimeter is an 136V dc.

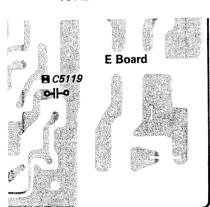


# (1) When a high tension meter is available.

# HV ADJUSTMENT ( ☐ C5119)

- 1. Confirm that the POWER switch is in OFF position.
- 2. Connect the positive lead of the high tension meter to the HV Block and negative lead to the gound lug beside the heat sink.
- 3. Disconnect the A-2 connector on the A board and install the tool shown in the figure. Connect a DC ammeter (3mA range) with the A board side connected to plus (+) side.
- 4. Feed in a dot pattern from a color-bar/pattern generator and supply 120V ac to with variable auto-transformer
- 5. Disconnect A-21, A-22 and A-23 connector from A board.
- 6. Turn the POWER to ON and confirm the raster disappears.
- 7. Confirm that there is less than 33.90 kV on high tension meter.
- 8. Turn the POWER switch to OFF and connect the A-21, A-22 and A-23 of A board.
- 9. Turn the POWER switch to ON and feed in a monoscope pattern.
- 10. Adjust the PICTURE and BRIGHT control so that I A R I 1550 ± 100 µA.
- 11. Confirm that there is less than 32-10 kV on high tension meter.
- 12. If necessary, select C5119 and repeat above steps.
- 13. Turn the POWER switch to OFF.





# HV HOLD DOWN ADJUSTMENT ( ■ R5217, R5218)

- 1. Confirm that the POWER switch is in OFF position.
- 2. Connect the positive lead of the high tension meter to the HV Block and negative lead to the ground lug beside the heat sink.
- 3. Mount ceramic capacitor (470pF) to C5119 of E board.
- 4. Disconnect A-21, A-22 and A-23 connector of A board.
- 5. Remove the SW. REG and take off G board.
- 6. Remove R620 and R621 of G board.
- 7. Install the tool shown in the figure.
- 8. Disconnect the A-2 connector on the A board and install the tool shown in the figure. Connect a DC ammeter (3mA range) with the A board side connected to plus (+) side.
- 9. Feed in a dot pattern from a color-bar/pattern generator.
- 10. Supply 120V ac to with variable auto-transformer.
- 11. Turn the POWER switch to ON.
- 12. Adjust RV1, so that HV HOLD DOWN circuit operate.
- 13. Confirm that the POWER is automatically turned off just when the voltage on the high tension meter is less than 34.65kV (When the raster disappears) if this not satisfied select the ■ R5217 and R5218.
- 14. Turn the POWER switch to OFF and feed in a monoscope pattern.
- 15. Turn RV1 to counterclockwise and connect A-21, A-22 and A-23 connector for A board.
- 16. Turn the POWER switch to ON and set the PICTURE and BRIGHT control at max.
- 17. Adjust RV1 so that HV HOLD DOWN circuit operate. 18. Confirm that there is less than 33.10kV and
- $I_{ABL}$  is 1650 ± 100 $\mu A$ .
- 19. Turn the POWER switch to OFF.
- 20. Disconnect the high tension meter and DC
- 21. Remove the tool and mount R620 and R621.

# (2) When a high tension meter is not available

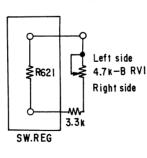
# HV ADJUSTMENT ( € C5119)

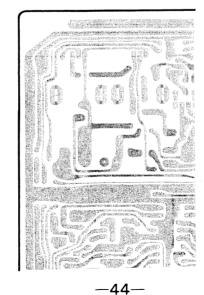
- 1. Check if the POWER SW in OFF.
- 2. Mount the 680pF/2 kV ceramic capacitor on the E board's C5119.

If the capacitor is already mounted on the C5119, mount the 680pF/2 kV ceramic cpacitor in parallel with the C5119.

## HV HOLD DOWN ADJUSTMENT ( ■ R5217, R5218, C5119)

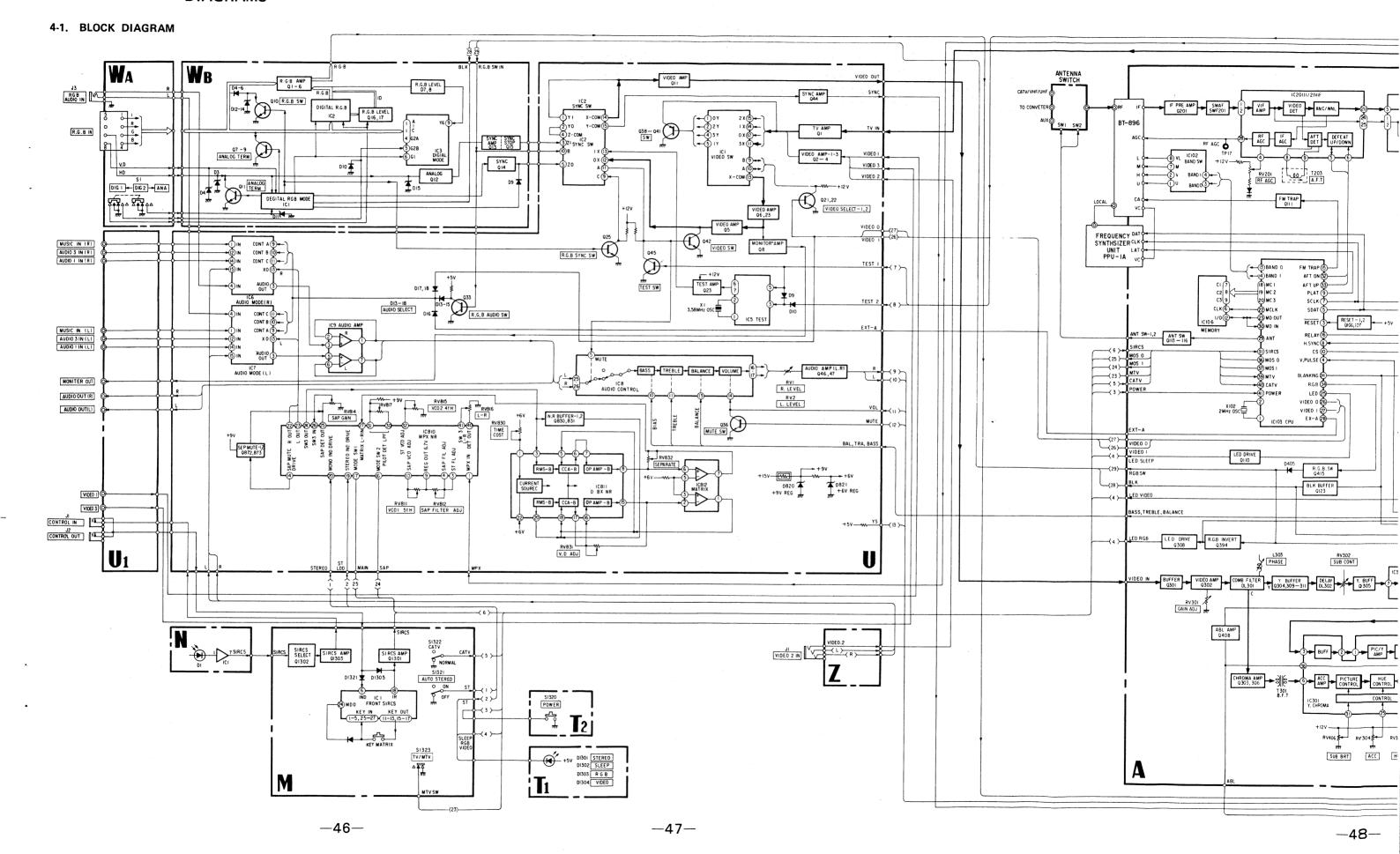
- 1. Open the front registration panel, and set the NOR/TEST selector to TEST. The built-in test pattern will then be received.
- 2. Set the user's control to RESET, and set PIC-TURE to 80%.
- 3. Check if the synchronization of the screen display is normal. If the synchronization is off, adjust by the RV5001 on the E board.
- 4. The resistance of the E board's R5217 and R5218 increases steadily and the HV HOLD DOWN circuit operates. Select the resistance which clears the screen display.
- 5. Mount two 680pF/2 kV ceramic capacitors in parallel with the E board's C5119. If it cannot be mounted normally, mount it on the back of the board.

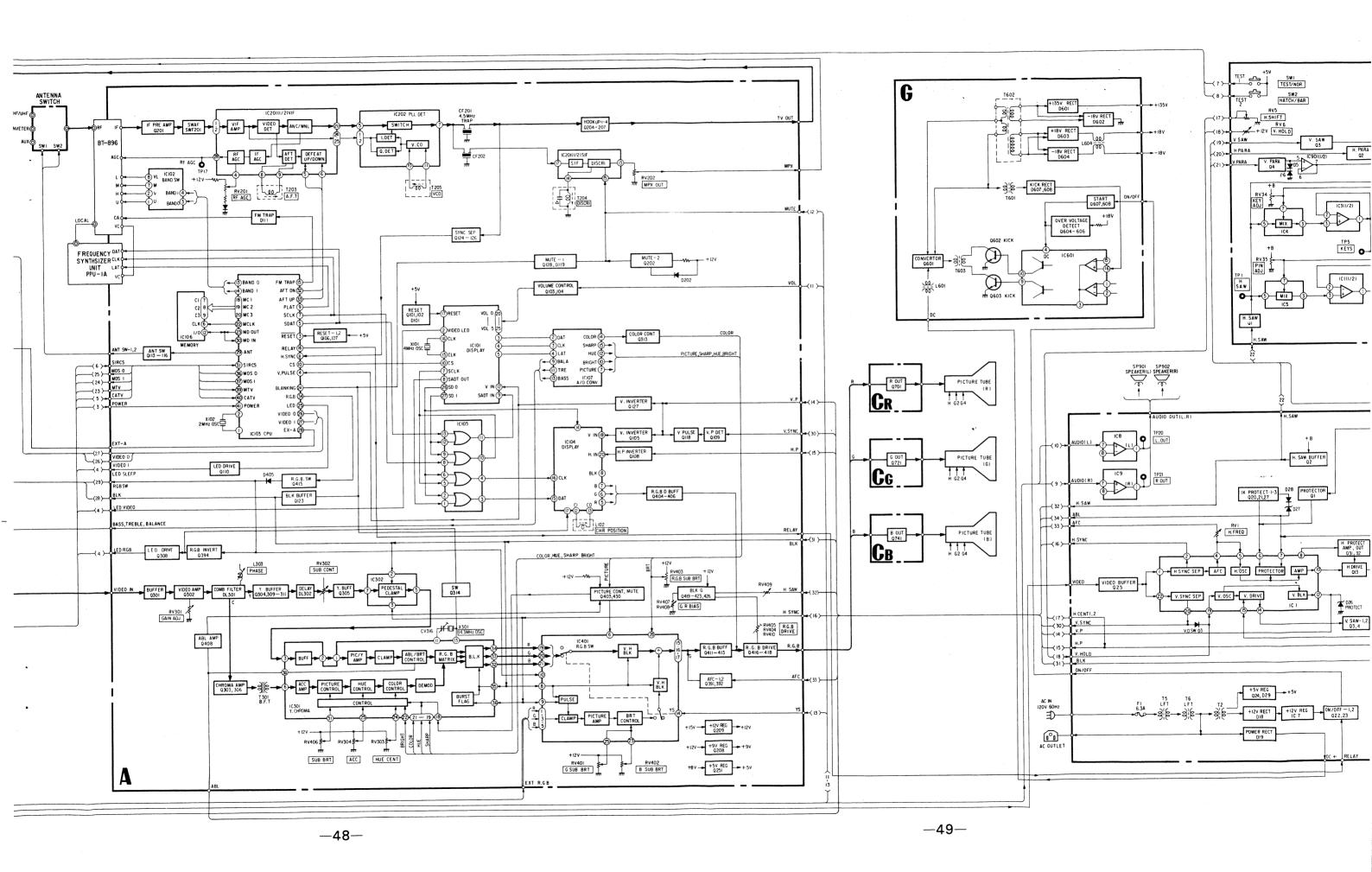


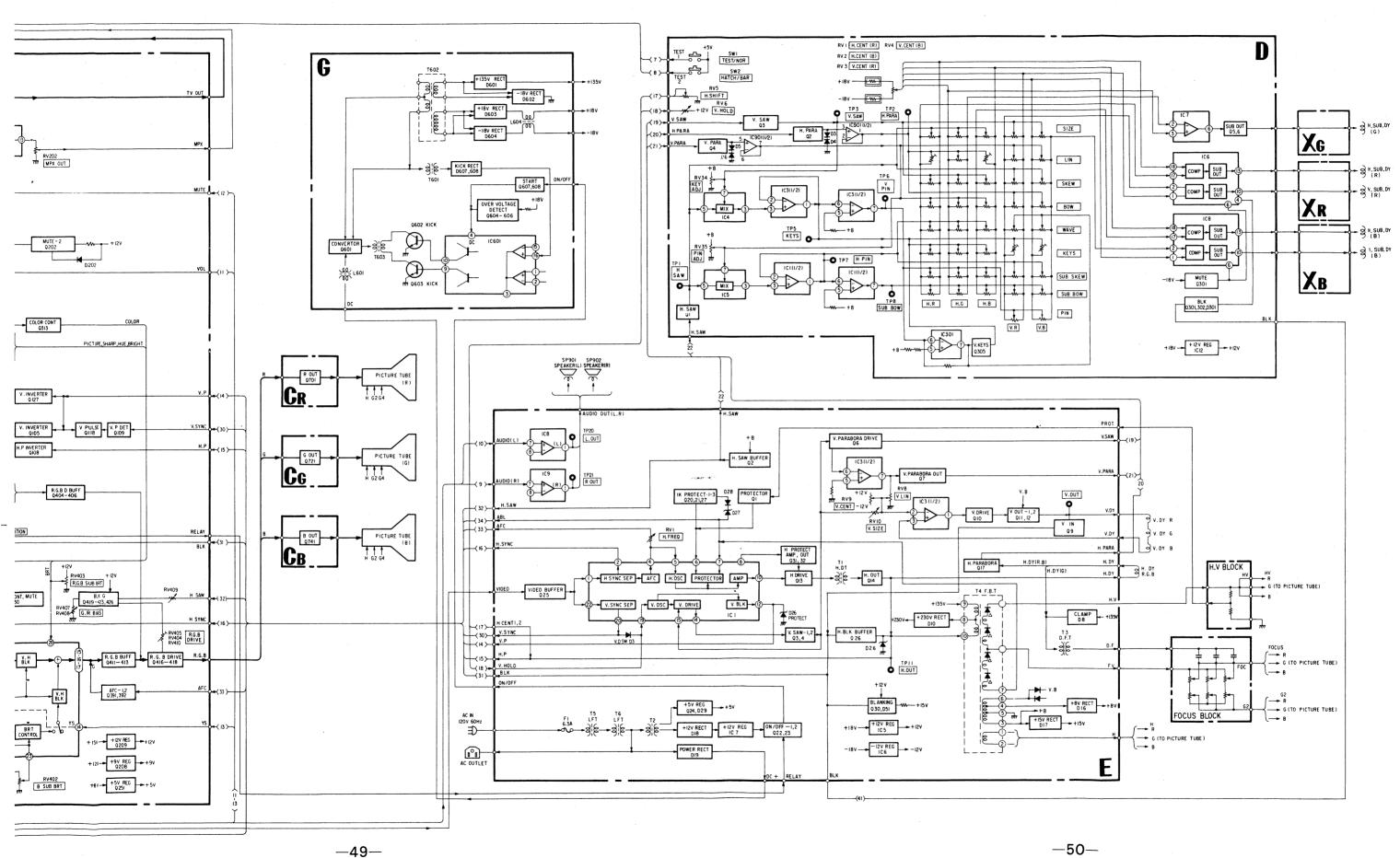


KPR-4620 RM-730 KPR-4620 RM-730

SECTION 4
DIAGRAMS

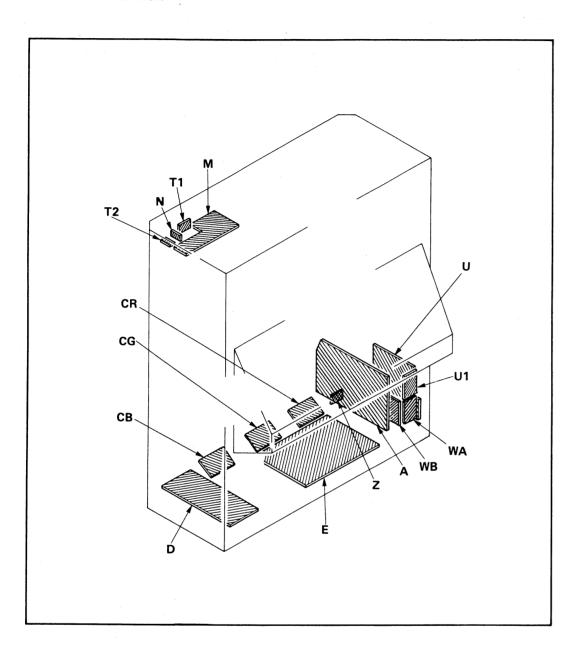






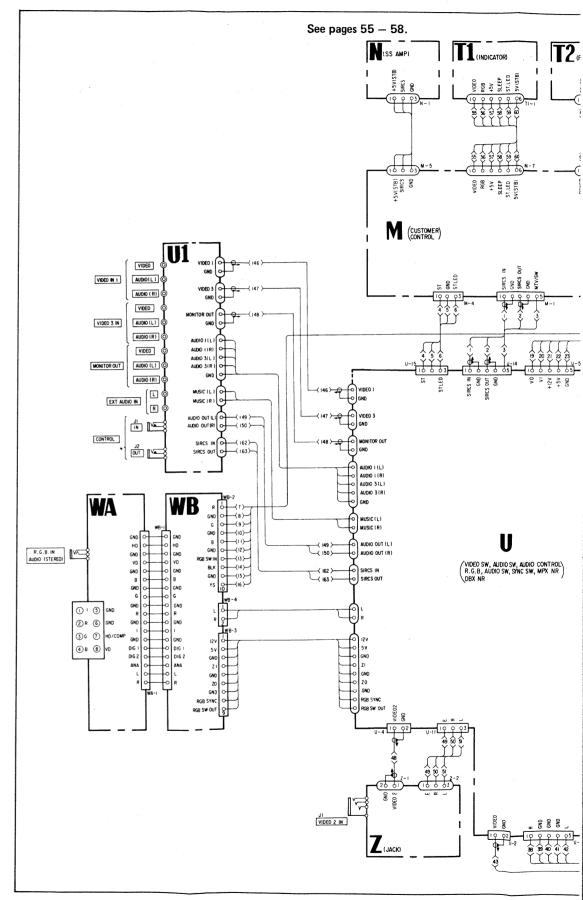
KPR-4620 KPR-4620 RM-730

# 4-2. CIRCUIT BOARDS LOCATION

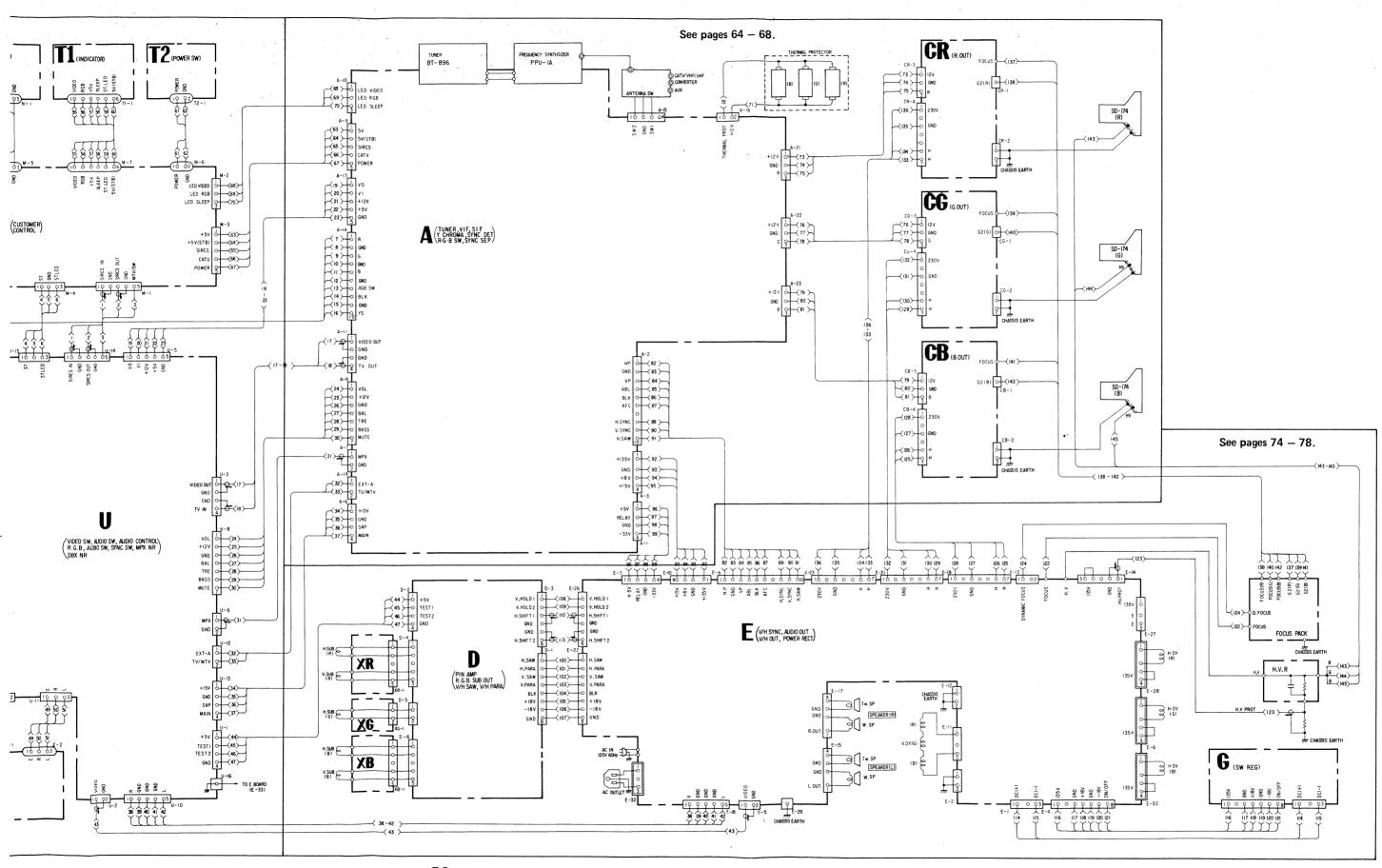


-51-

# 4-3. FLAME SCHEMATIC DIAGRAM



**-52**-



KPR-4620 RM-730

- Ref. No. U, U1 BOARD: 8000 series -

KPR-4620

# Note: The components identified by shading and mark A are critical for safety. Replace only with part number specified.

### Note:

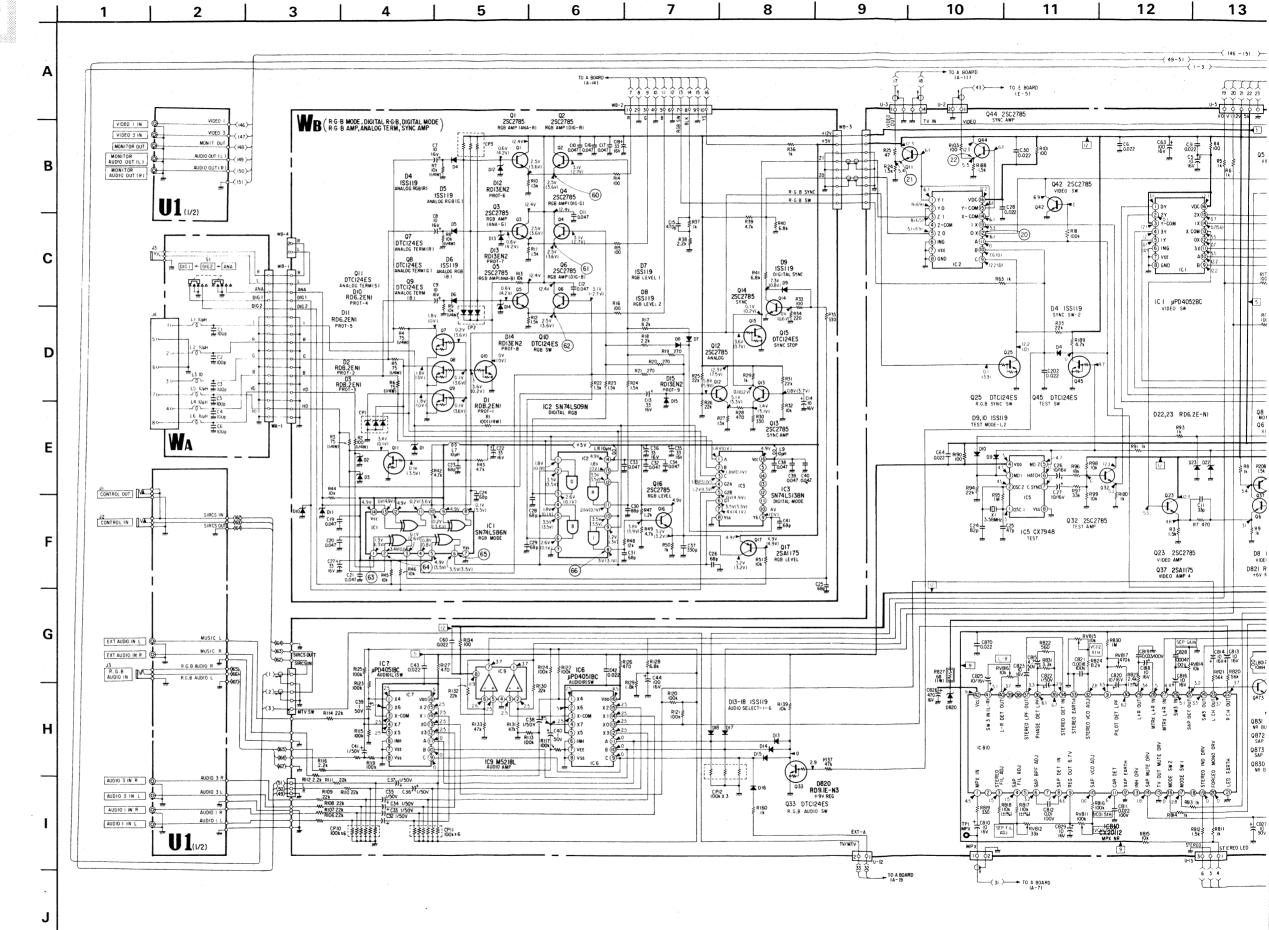
- All capacitors are in μF unless otherwise noted. pF : μμF
   50WV or less are not indicated except for electrolytics.
- Resistors on G board and BA board are %W, and those on all other board's are 1/6W.  $k\Omega$ : 1000 $\Omega$ ,  $M\Omega$ : 1000 $k\Omega$
- monflammable resistor.
- △ : internal component.
- panel designation.
- The components identified by 
   ☐ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value 'originally used.
- When replacing components identified by ☐, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ☐ and repeat the adjustment until the specified value is achieved.

(Refer to HV HOLD DOWN and HV adjustments on page 43 - 45).

When replacing the part in below table, be suer to perform the related adjustment.

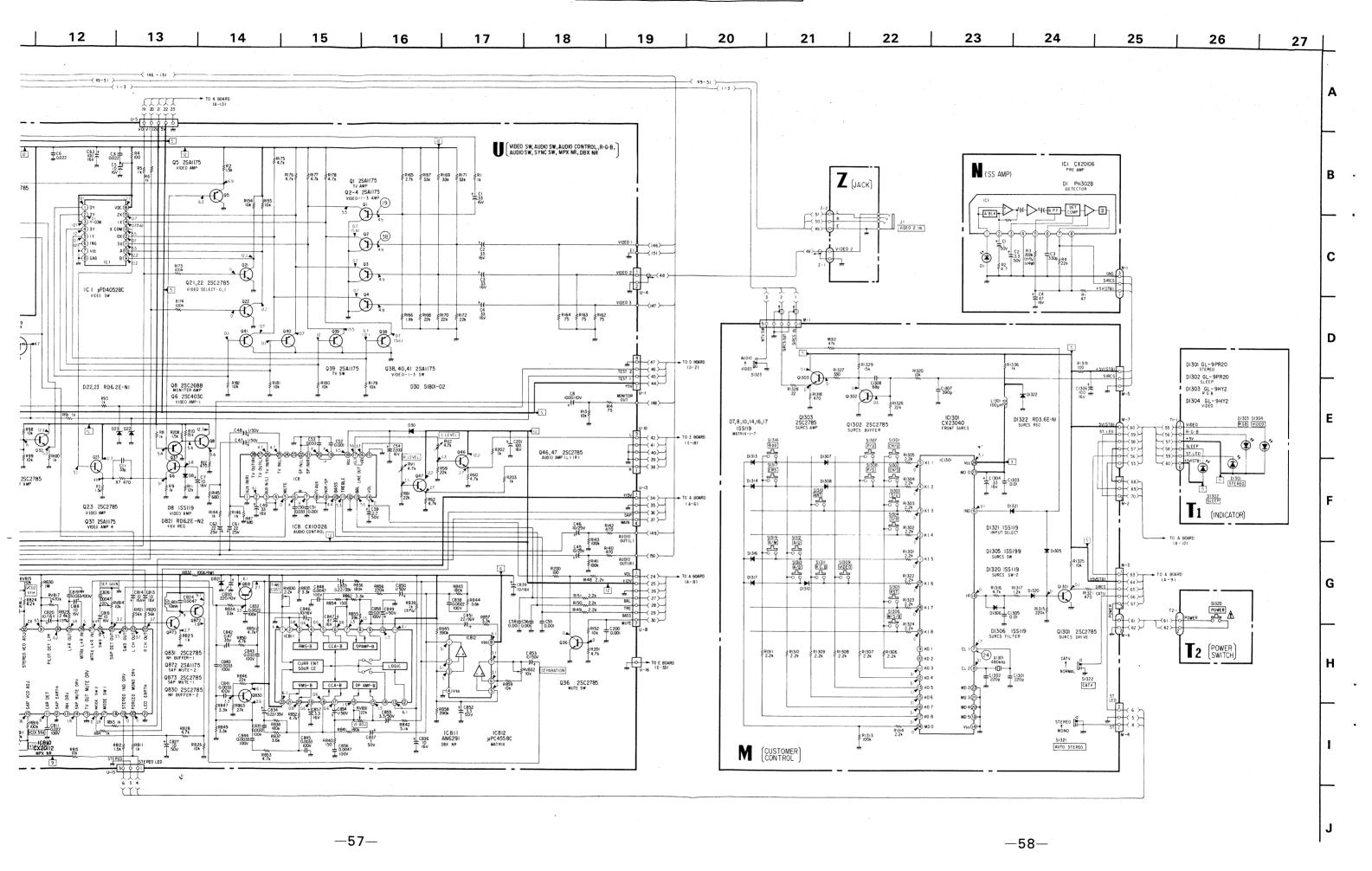
Part replaced	Adjustment
E board complete HV block IC5001, Q5001, D5002, R5216, R5217, R5218, R5219, R5220, R5221, R5297, R5020, R5021, R5022, R5024, R5027	HV HOLD DOWN ADJUSTMENT (R5217, R5218)
E board complete Deflection yoke Switching regulator F. B. T L5004, L5005, L5010, C5037, C5038, C5039, C5058, C5059, C5060, C5064, C5119, R5066, R5096	in E board ADJUSTMENT C5119

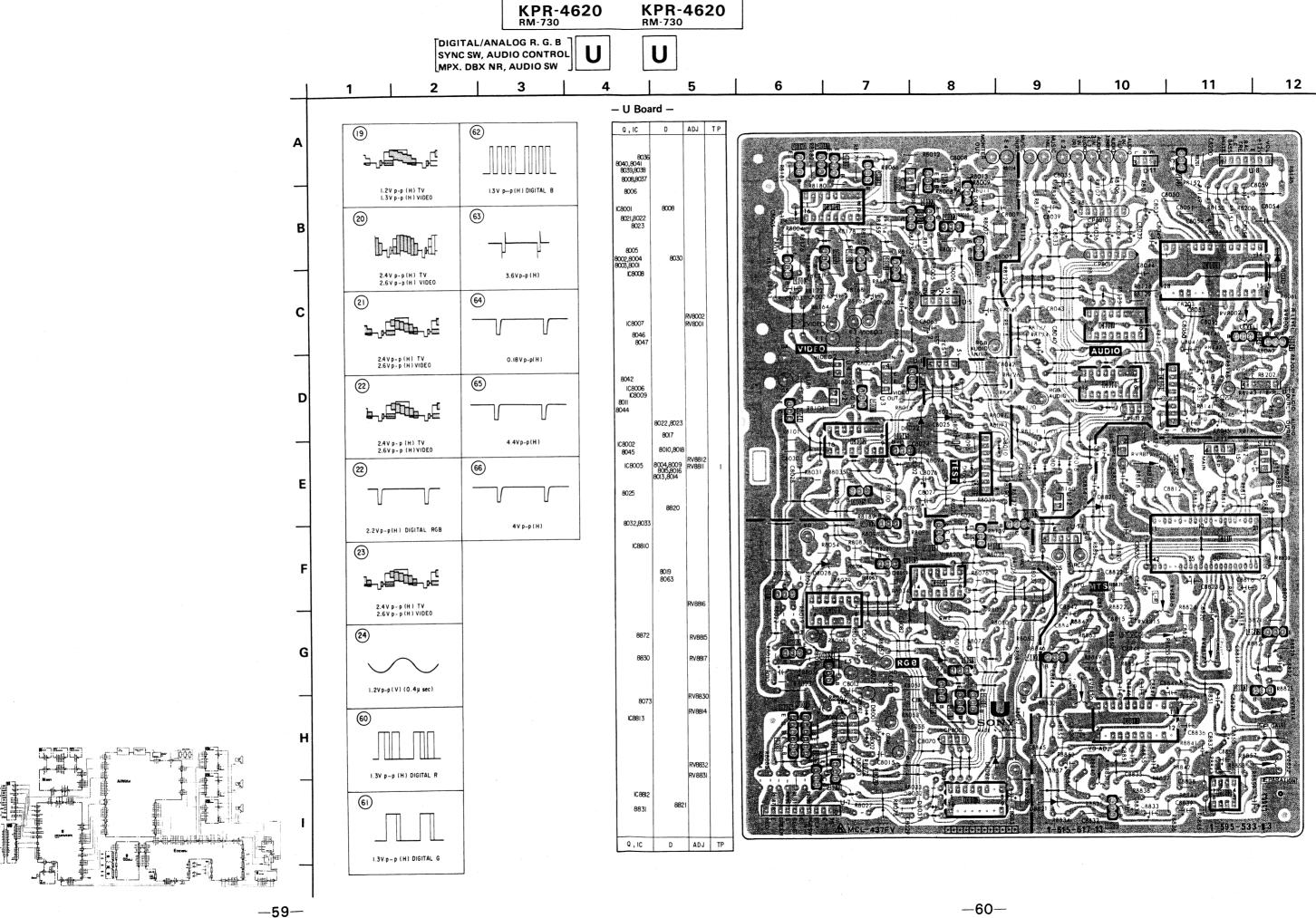
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages are dc with respect to ground unless otherwise noted,
- Readings are taken with a  $10M\Omega$  digital multimeter.
- \_\_\_\_\_: adjustment for repair.
- Readings are taken with a color-bar signal input. no mark: Normal
- ( ): Color bar video signal received
- Voltage variations may be noted due to normal production tolerances.
- 🚾 : B+ bus.
- 👿 : B- bus.
- Circled numbers are waveform references.

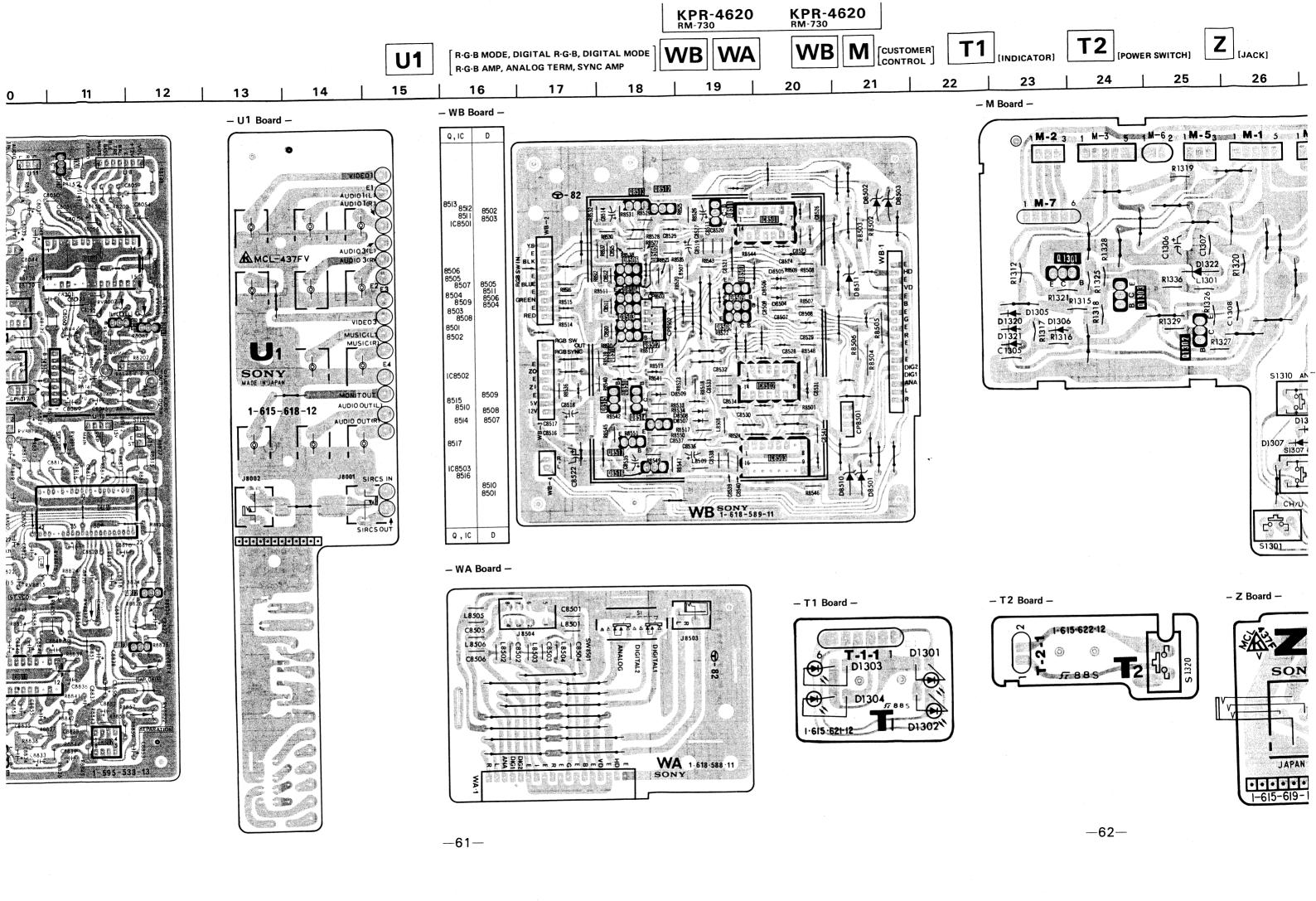


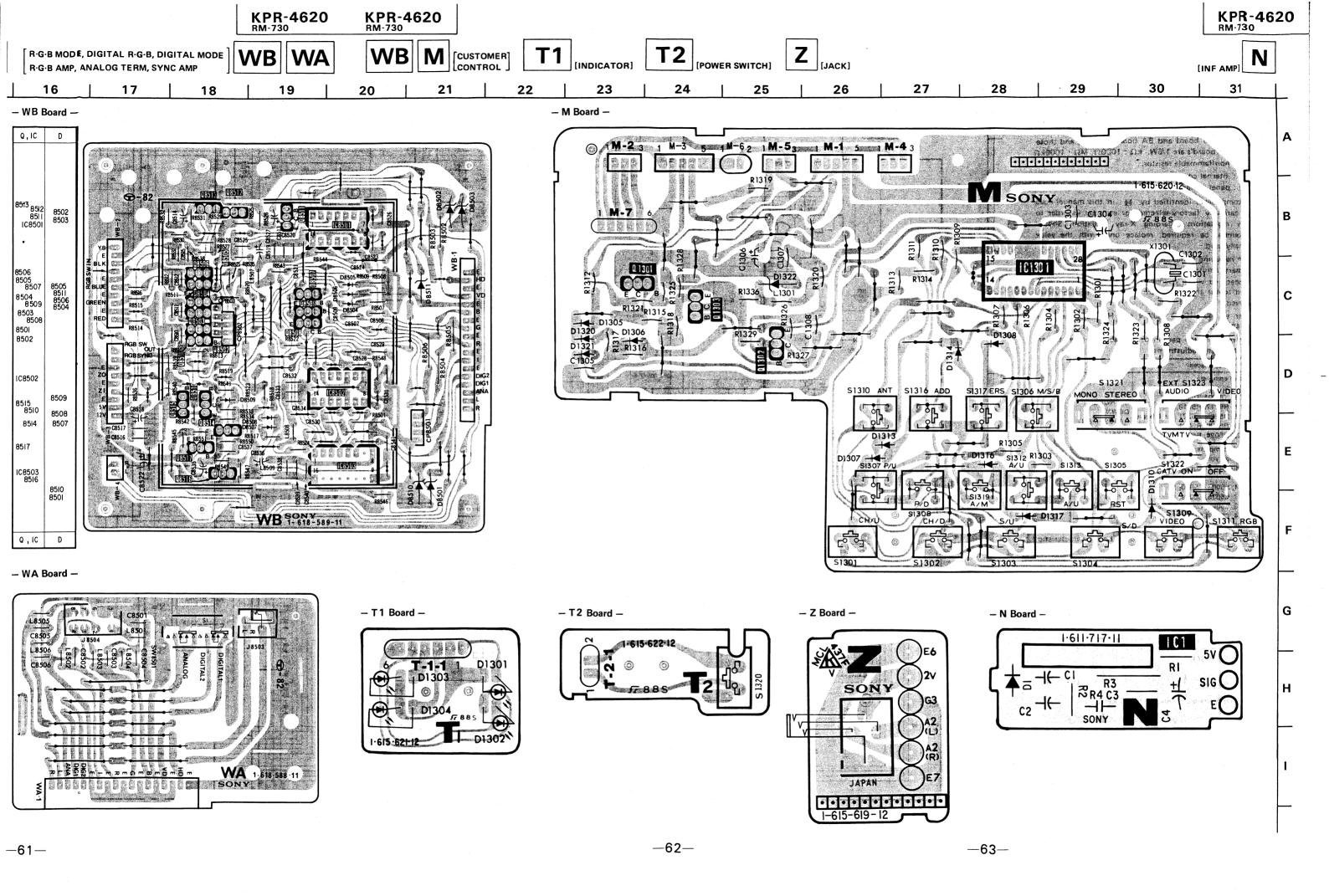
-56-

KPR-4620 KPR-4620 RM-730









Note: The components identified by shading and mark are critical for safety. Replace only with part number specified. - Ref. No. A BOARD: 8000 series -

### Note:

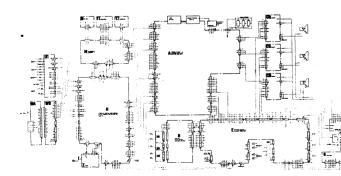
- All capacitors are in μF unless otherwise noted. pF : μμF
   50WV or less are not indicated except for electrolytics.
- Resistors on G board and BA board are ¼W, and those on all other board's are 1/6W.  $k\Omega$  :  $1000\Omega,\,M\Omega$  :  $1000k\Omega$
- ronflammable resistor.
- Δ : internal component.
- panel designation.
- The components identified by ☐ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved.

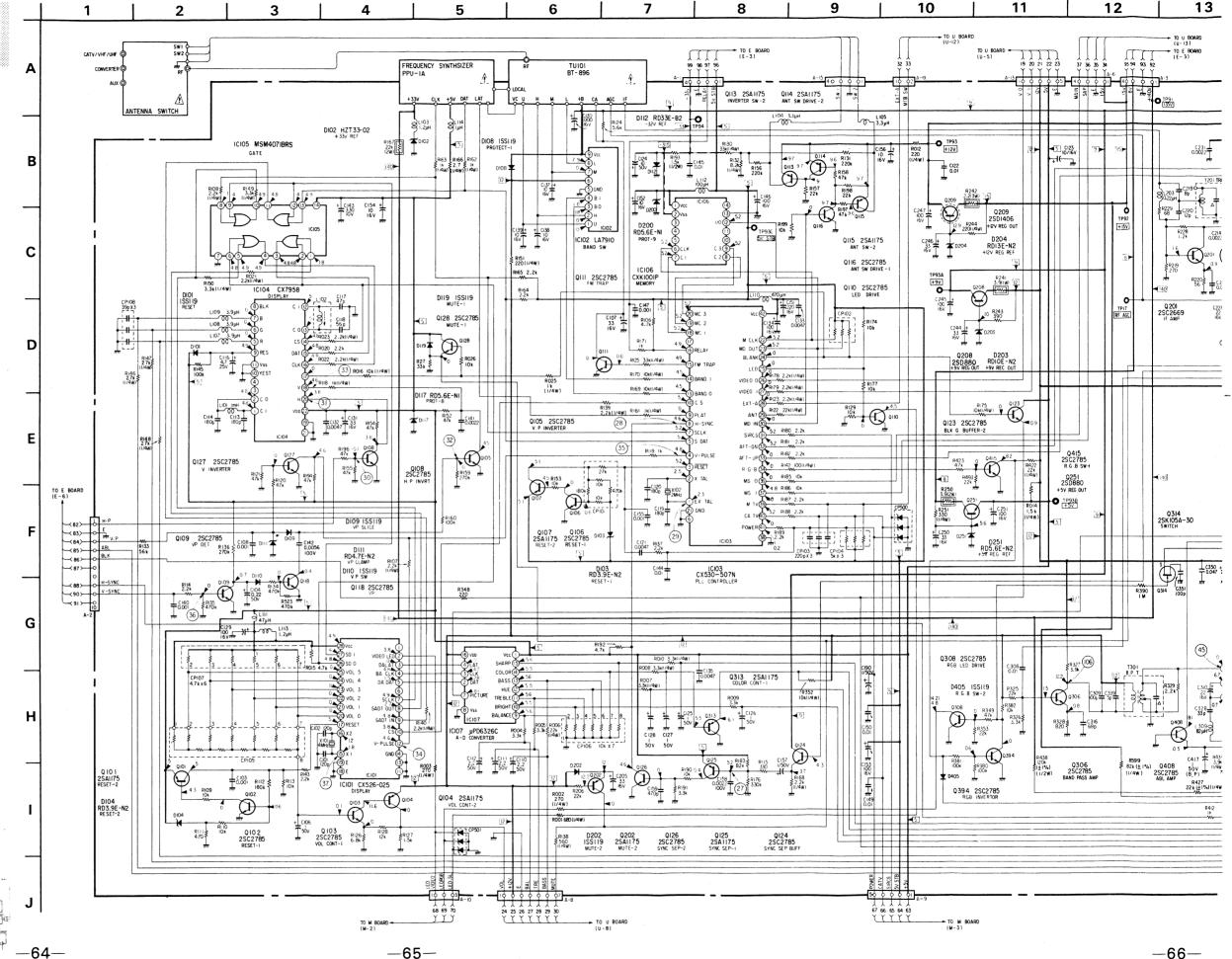
(Refer to HV HOLD DOWN and HV adjustments on page 43-45).

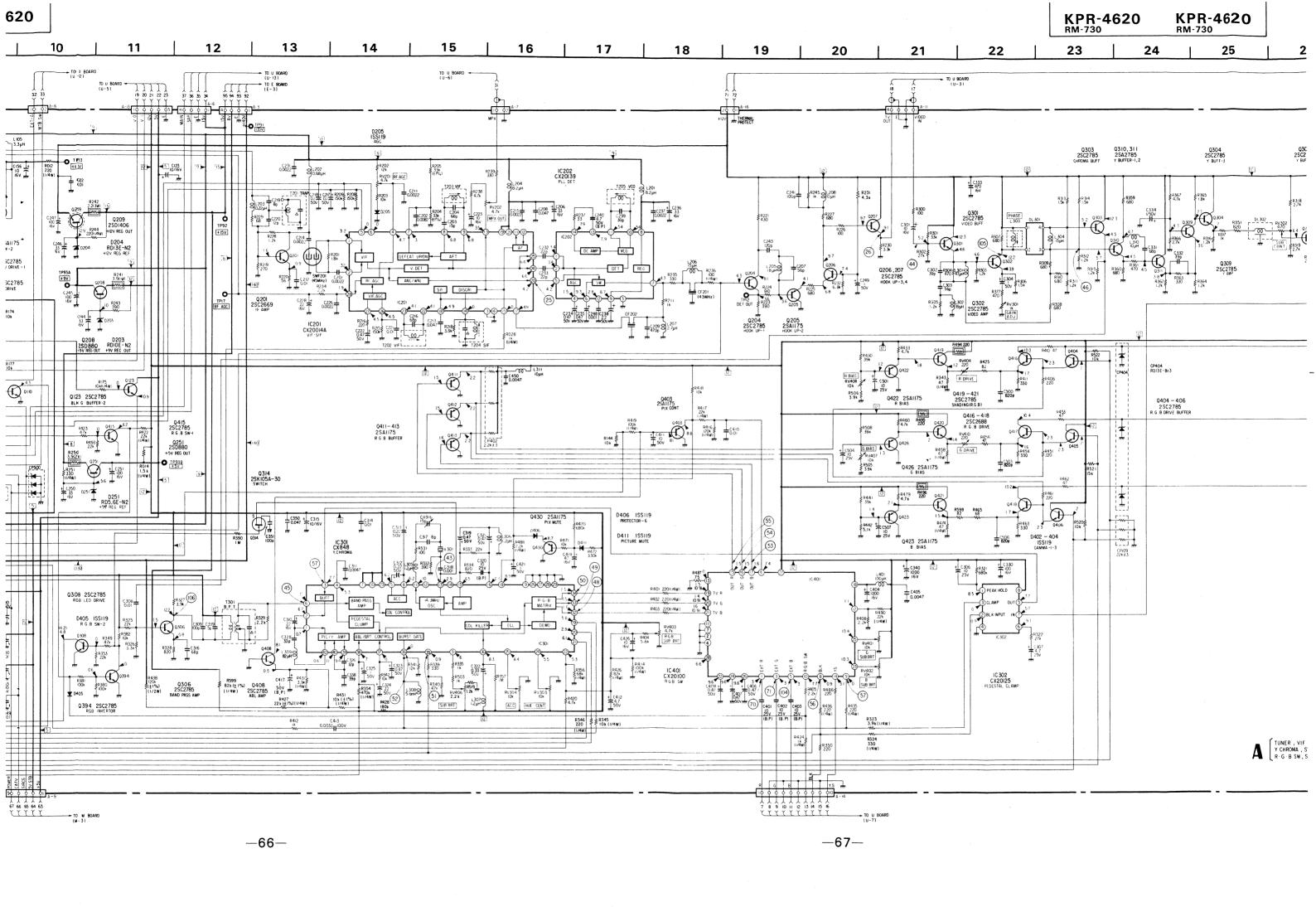
 When replacing the part in below table, be suer to perform the related adjustment.

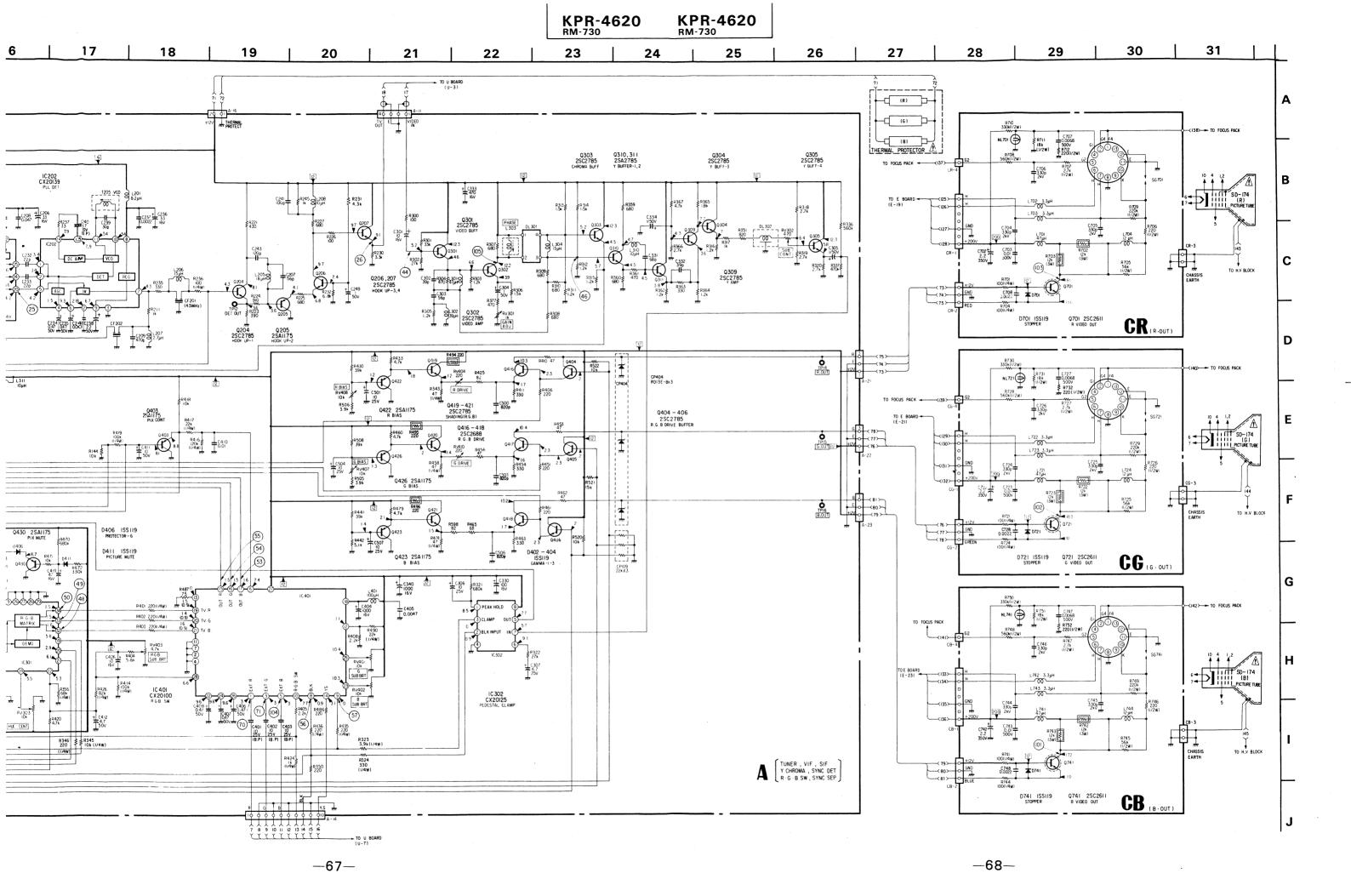
Part replaced		Adjustment
E board complete HV block IC5001, Q5001, D5002, R5216, R5217, R5218, R5219, R5220, R5221, R5297, R5020, R5021, R5022, R5024, R5027	in E board	HV HOLD DOWN ADJUSTMENT (R5217, R5218)
E board complete Deflection yoke Switching regulator F. B. T L5004, L5005, L5010, C5037, C5038, C5039, C5058, C5059, C5060, C5064, C5119, R5066,	in E board	HV ADJUSTMENT C5119

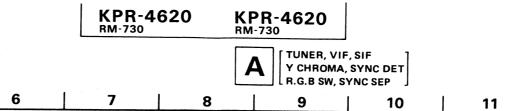
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a  $10M\Omega$  digital multimeter.
- adjustment for repair.
- Readings are taken with a color-bar signal input. no mark: Normal
  - ): Color bar video signal received
- Voltage variations may be noted due to normal production tolerances.
- \_\_\_\_\_\_ : B+ bus.
- \_\_\_\_\_ B- bus.
- Circled numbers are waveform references.









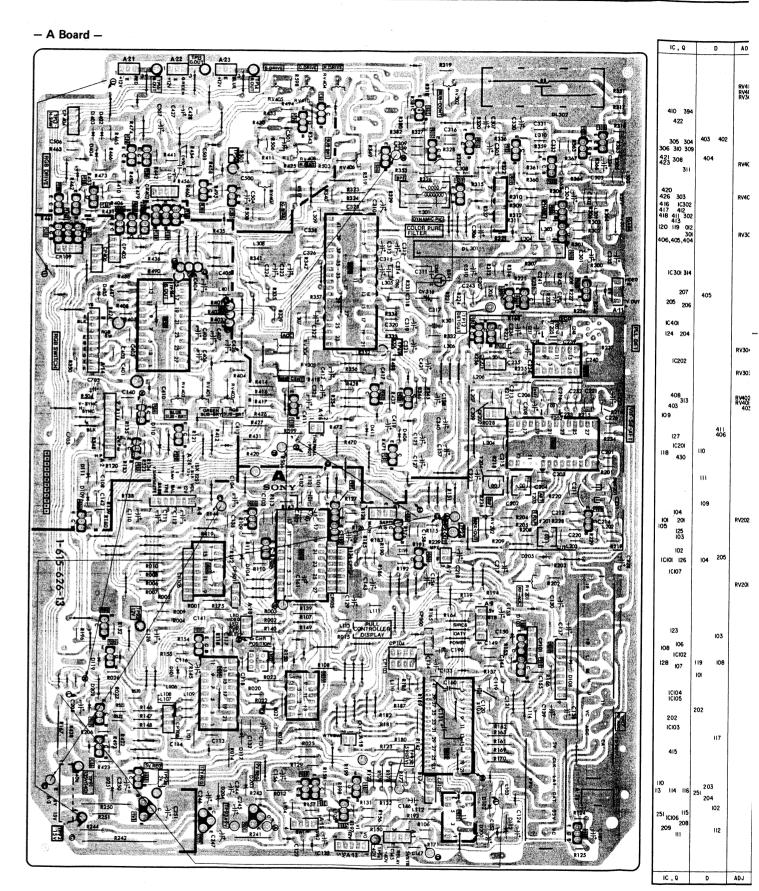


2.2Vp-p(H) TV 3.4Vp-p(H) TV, VIDEO (26) 35) (58) 5-p= 10-p= 2Vp-p(H) TV 3.4Vp-p (H) TV, VIDEO I.5Vp-p(H) 27) 50 2Vp-p(H) TV 7 V p-p ( V ) 3.4Vp-p(H) TV, VIDEO 0.8Vp-p(H) DIGITAL RGB (28) 4Vp-p (H) 5Vp-p(H) TV 5.5Vp-p (4MHz) 0.8 Vp-p(H) DIGITAL RGB 29 (101) 0.27Vp-p(14.3MHz) 4.6Vp-p (2MHz) 3.8 p-p (H) 140Vp-p(H) 30 44) 1Vp-p(H) 2.6Vp-p(H) TV, VIDEO 2.8Vp-p(H) TV, VIDEO 31) 5Vp-p(H) IVp-p(H) TV, VIDEO 2.8Vp-p(H)TV, VIDEO 100Vp-p(H) 32 46) (55) 0.6V p-p(V) 2.8Vp-p(H) TV, VIDEO 0.6 V p - p (H) TV, VIDEO 0.8Vp-p(H) DIGITAL RGB 4Vp-p(H) 0.6V p-p (H) TV, VIDEO 5Vp-p(V) 1.2Vp-p (H) TV, VIDEO

4

5

2

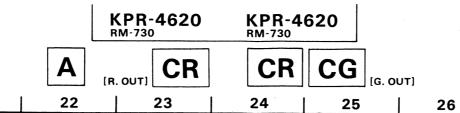


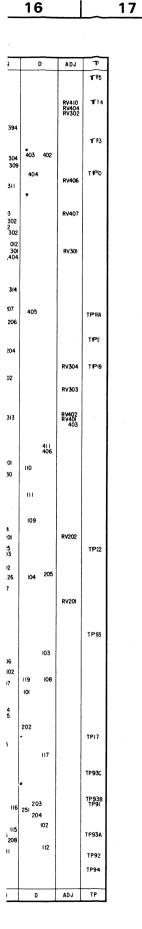
12

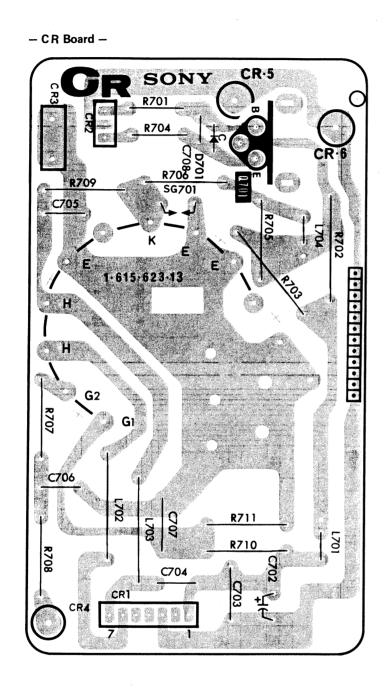
13

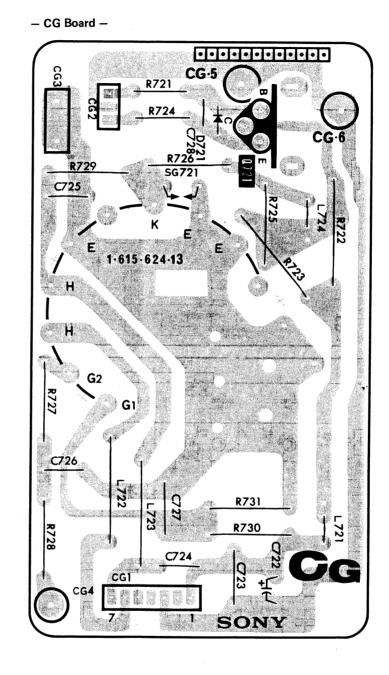
14

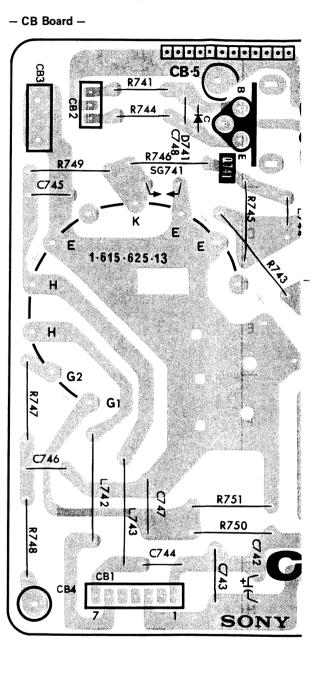
15









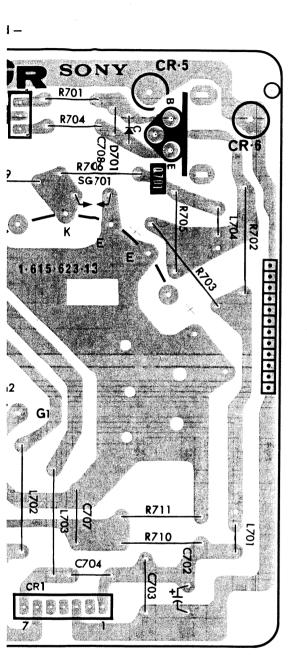


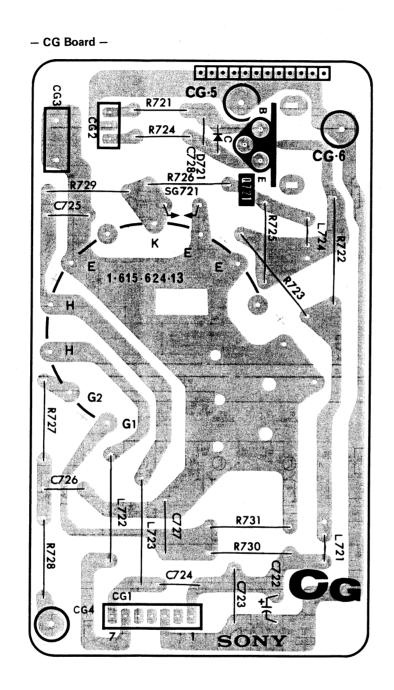


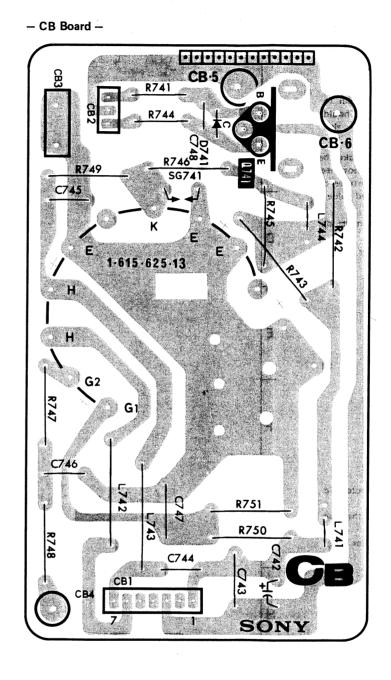
KPR-4620 RM-730

CB

D







Note: The components identified by shading and mark

Note: The components identified by shading and mark

A are critical for safety. Replace only with
part number specified.

## Note:

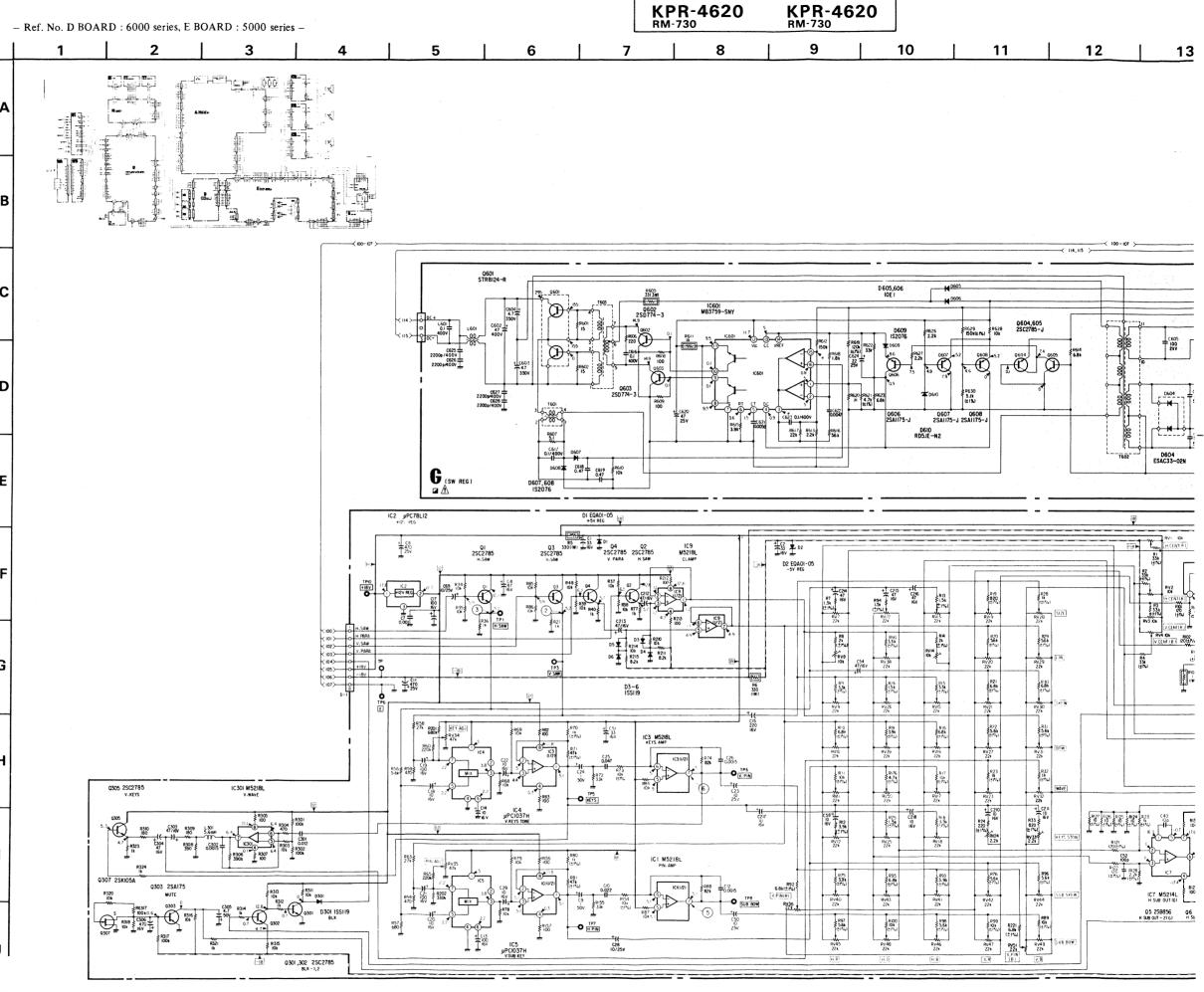
- All capacitors are in μF unless otherwise noted. pF : μμF
   50WV or less are not indicated except for electrolytics.
- Resistors on G board and BA board are ¼W, and those on all other board's are 1/6W.  $k\Omega$  :  $1000\Omega$ ,  $M\Omega$  :  $1000k\Omega$
- monflammable resistor.
- △ : internal component.
- : panel designation.
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by
   and repeat the adjustment until the specified value is achieved.

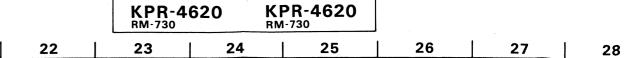
(Refer to HV HOLD DOWN and HV adjustments on page 43-45).

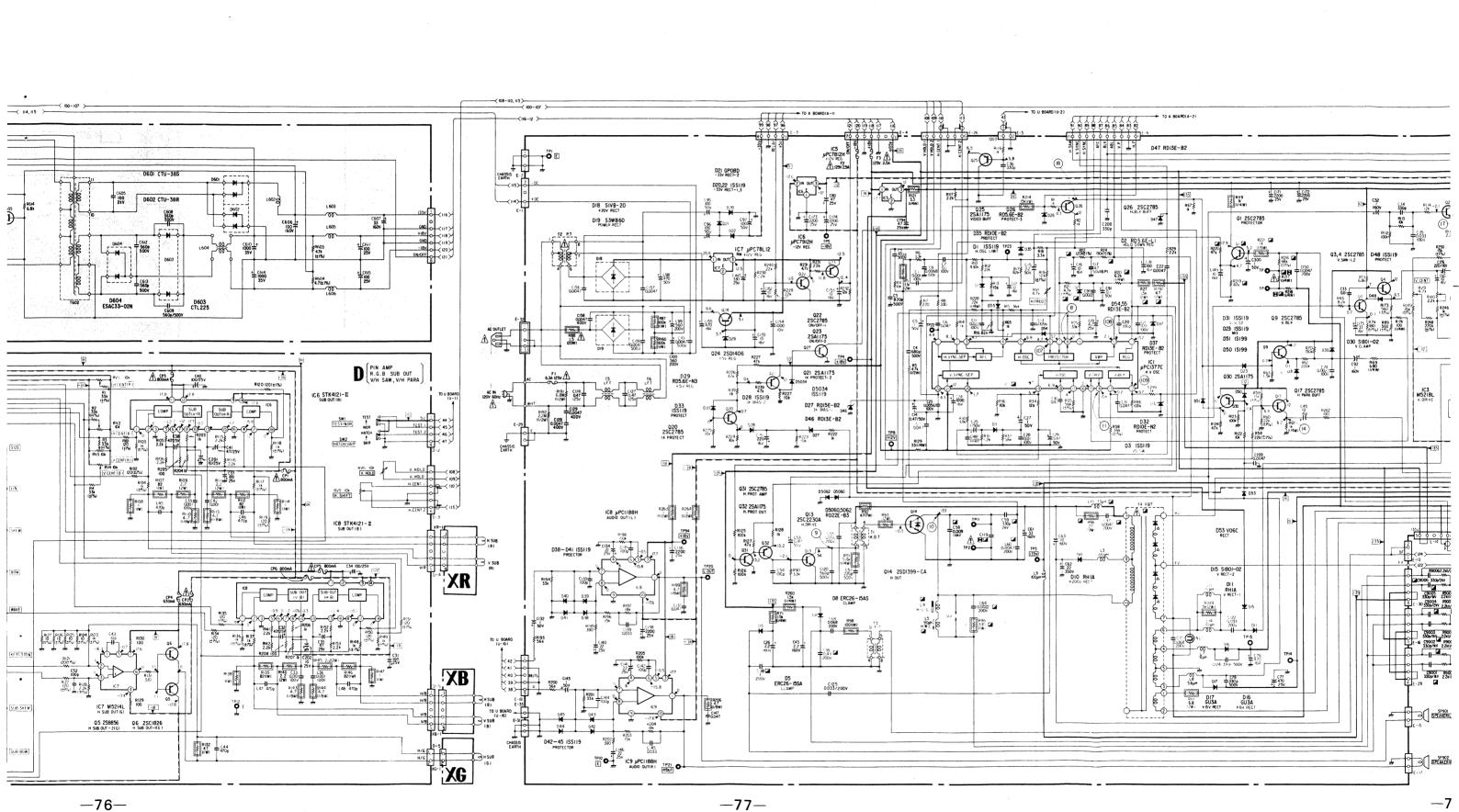
When replacing the part in below table, be suer to perform the related adjustment.

Part replaced		Adjustment
E board complete HV block IC5001, Q5001, D5002, R5216, R5217, R5218, R5219, R5220, R5221, R5297, R5020, R5021, R5022, R5024, R5027		HV HOLD DOWN ADJUSTMENT (R5217, R5218)
E board complete Deflection yoke Switching regulator F. B. T L5004, L5005, L5010,		
C5037, C5038, C5039, C5058, C5059, C5060, C5064, C5119, R5066, R5096	in E board	HV ADJUSTMENT C5119

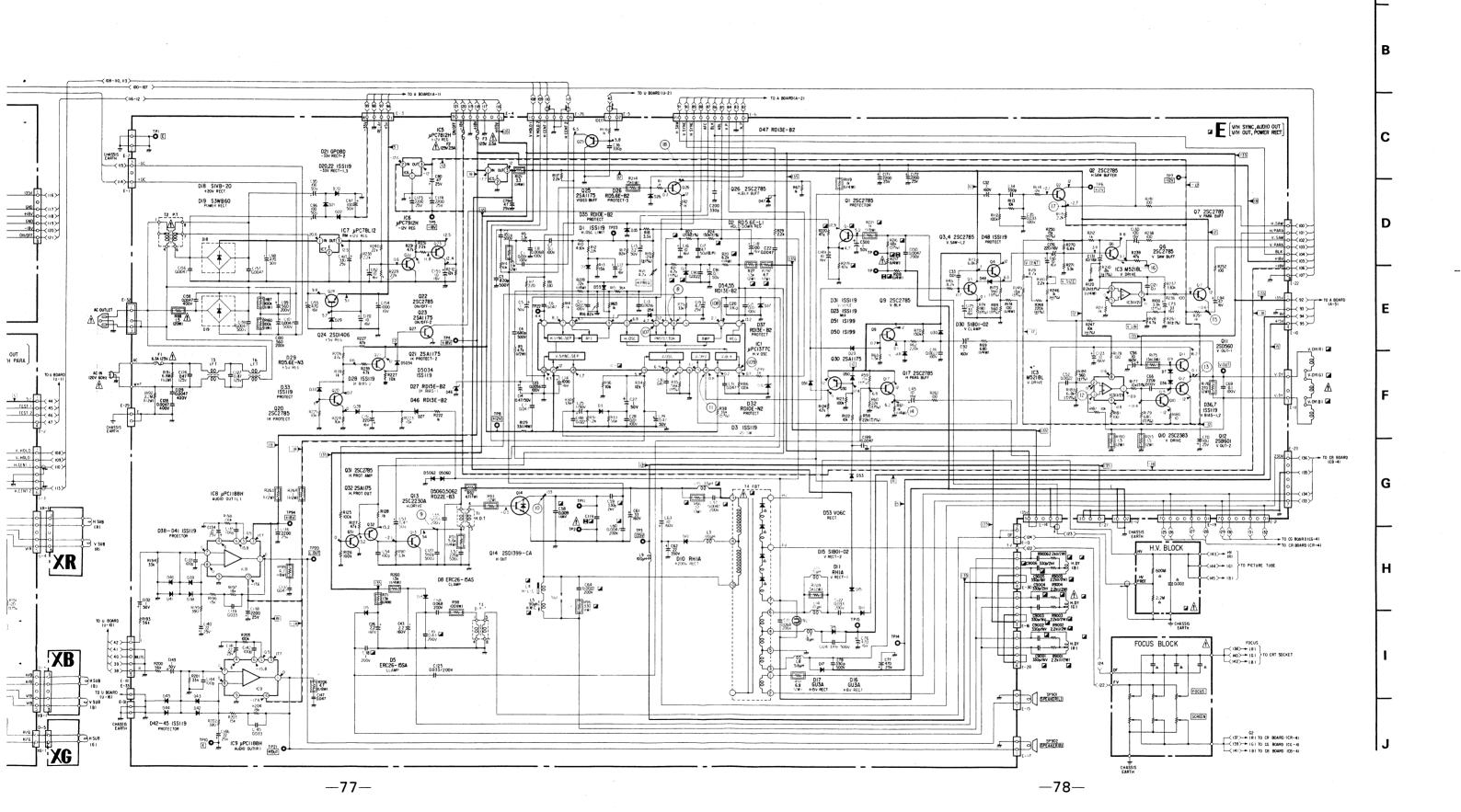
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a  $10M\Omega$  digital multimeter.
- adjustment for repair.
- Readings are taken with a color-bar signal input, no mark: Normal
  - ( ): Color bar video signal received
- Voltage variations may be noted due to normal production tolerances.
- <u>v</u> : B+ bus.
- \_\_\_\_\_ B- bus.
- Circled numbers are waveform references.

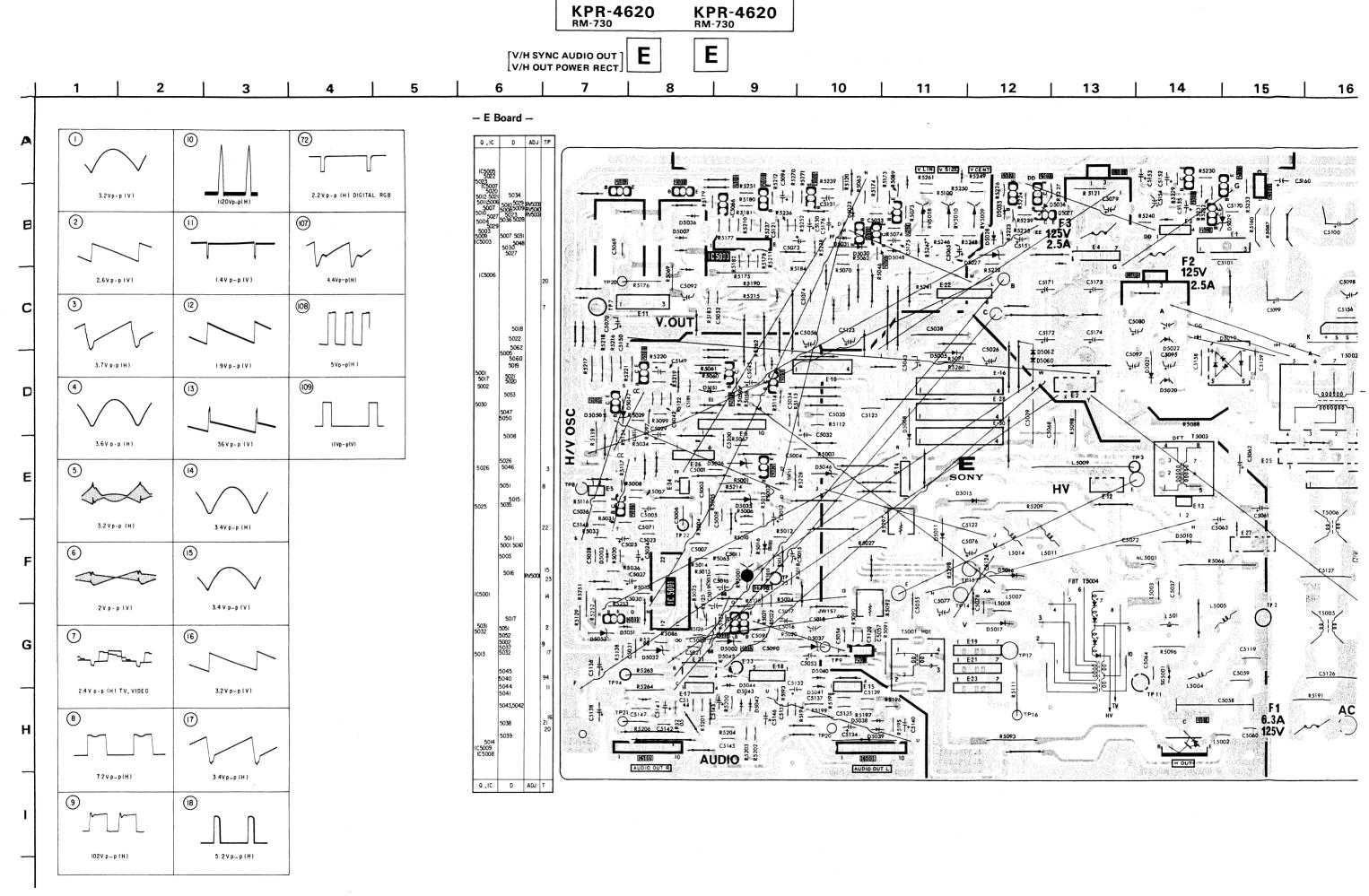


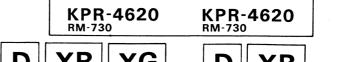




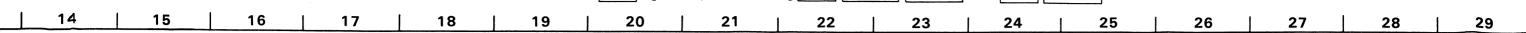
KPR-4620 KPR-4620 RM-730

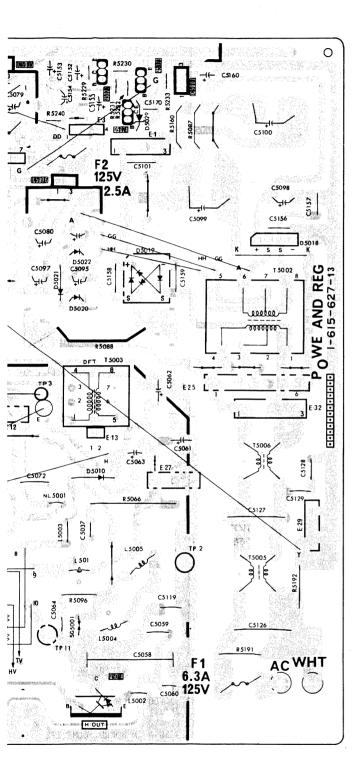


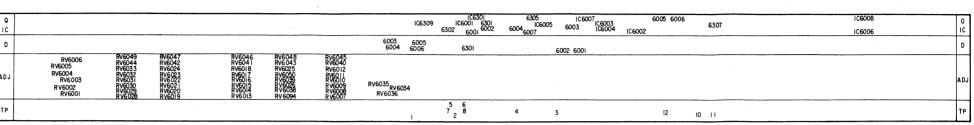


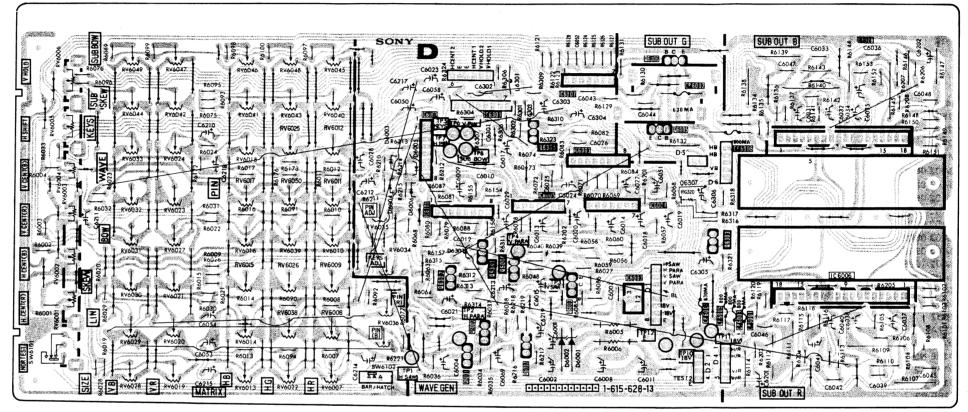


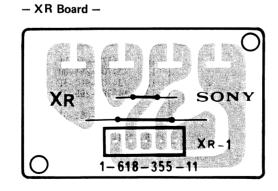




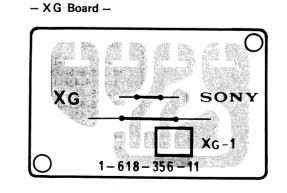


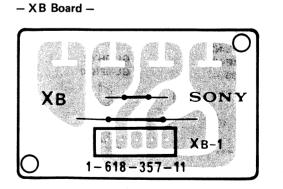




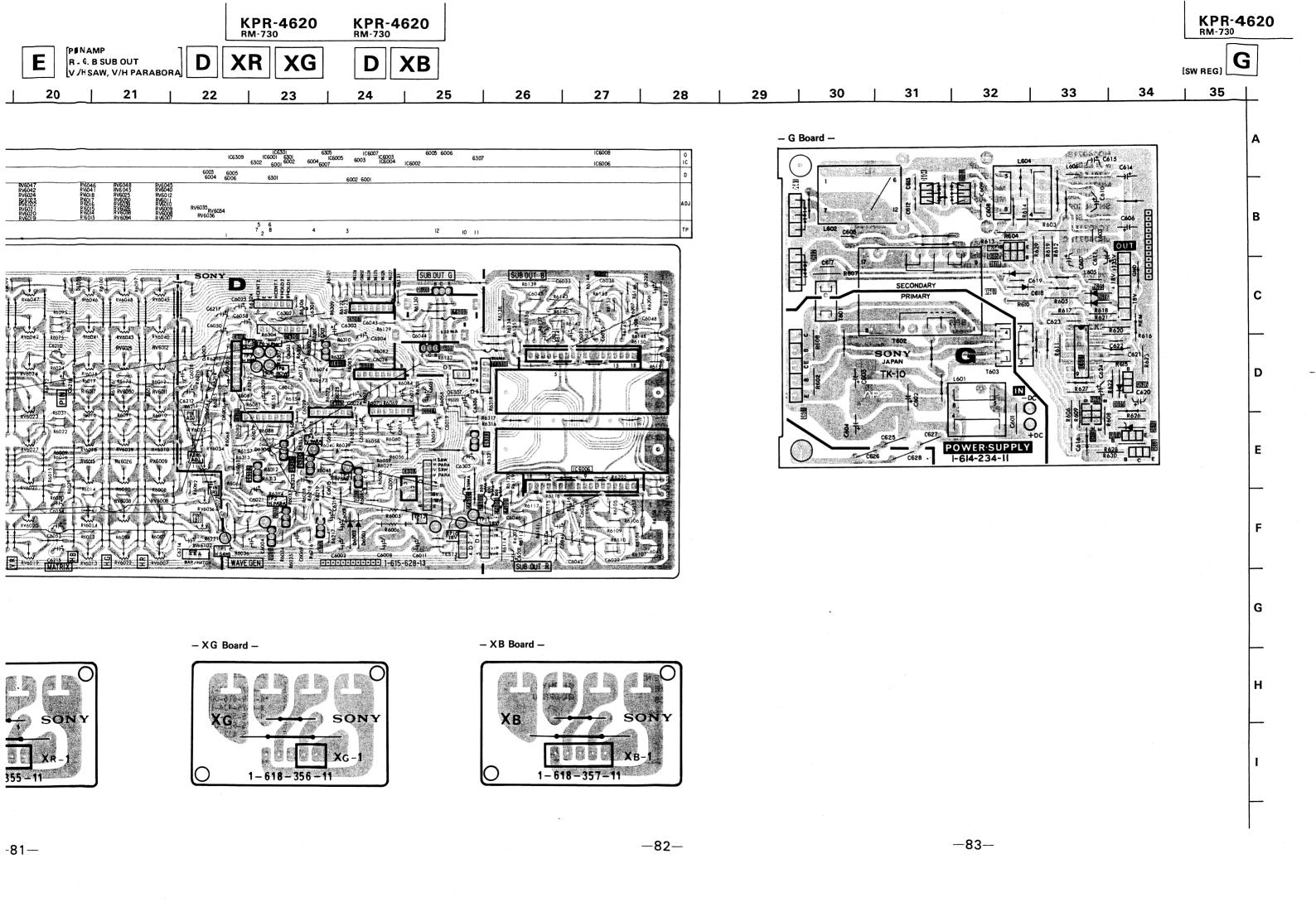


- D Board -





- G Boar



NOTE:

# 4-5. SEMICONDUCTORS

AN6291 CX848 CX20112 (Top view)

AN78L12 NJM78L12A TA78L012AP μPC78L12



CX526-025 CX10026 CX20014A CX20100



CX530-507N



CX7948 CX20106 CX20106A CX20125 M5218L



μPC1377C



CXK1001P HD74LS09P HD74LS86P HD14071BP M74LS09P M74LS86P MB74LS09 MB74LS86

SN74LS09N SN74LS86N TC4071BP μPD4071BC 1413121110 9 8

(Top view)















HD14051BP HD14052BP HD14053BP M4051BP M4052BP M4053BP M4071BP

MB84051B MB84052B MB84053B MB84071B MC14051BCP MC14052BCP MC14053BCP MC14071BCP MSM4051BRS MSM4052BRS MSM4053BRS MSM4071BRS SN74LS138N TC4051BP

TC4052BP TC4053BP TC4071BP μPD4051BC μPD4052BC μPD4053BC μPD6326C









μPC7812H



2SA733 2SA933S 2SC1740S











2SB601



2SB856 2SC1826-0 2SD313HP 2SD560 2SD880 2SD880-Y 2SD1406 2SD1406-Y















2SD1135



1SS119

**1SS120** 

**1SS133** 

**1SS148** 

10E2

EQA01-05

ERB12-02

GP08D

HZ4A2

HZ6A3

HZ6B3

HZ6C2

HZ9C1

RH1A

SIB01-02

HZ12B2

HZ33EB2

HZ5.6EB2

EQA02-12B5

2SD1399-CA



HZ4B3

HZ5B1

HZ6B2

RD13E-N2

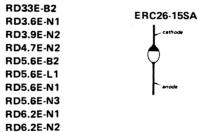
RD18E-B3

RD9.1E-N3

US1035

1N4148H 1S1555 **1S2076 1S2473** EM1Z EQA02-05A5 EQA02-06A EQA02-06A5 EQA02-06B5 EQA02-06C5 EQA02-06D5 EQA02-09C5 EQA02-10B5











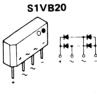
anode



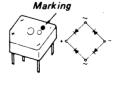


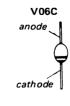






**S3WB60S** S3WB60Z



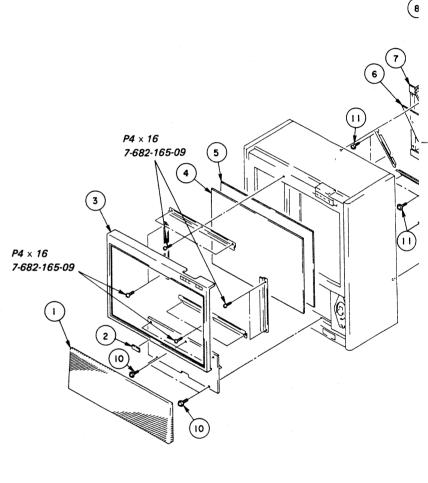


### · Items with no part number and no des-• Items marked " \* " are cription are not stocked because they since they are seldom are seldom required for routine service. routine service. Some del · The construction parts of an assembled anticipated when ordering

# 5-1. CABINET

part are indicated with a collation

number in the remark column.



0.	Part No.	Description	Remark	No.	
1	X-4375-433-1	GRILLE ASSY, SPEAKER		10	
2	*4-359-616-00	EMBLEM, SONÝ		11	
3	X-4375-434-1	FRAME ÁSSY, SCREEN	2	12	
4	4-375-528-01	PLATE (F), DIFFUSION		13	*
5	4-375-529-01	PLATE (L), DIFFUSION			
6	4-375-432-01	MIRROR, REFLECTION			*
7	*4-375-451-01	COVER, MIRROR		İ	
8	*4-375-437-01	COVER (U), BACK		15	
9	*4-375-452-01	COVER (L), BACK			

# KPR-4620 RM-730

# **SECTION 5 EXPLODED VIEWS**

NOTE:

5-1. CABINIT

• Items with to part number and no description a renot stocked because they

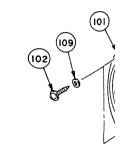
• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items. are seldom required for routine service.

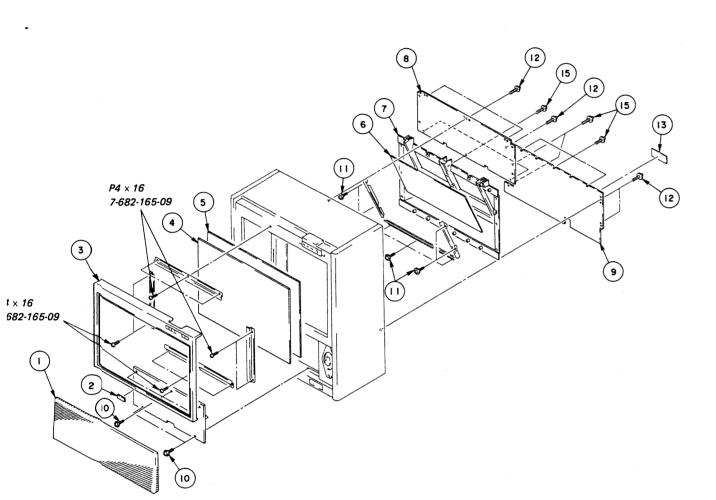
The construction parts of an assembled part are idicated with a collation number in the remark column.

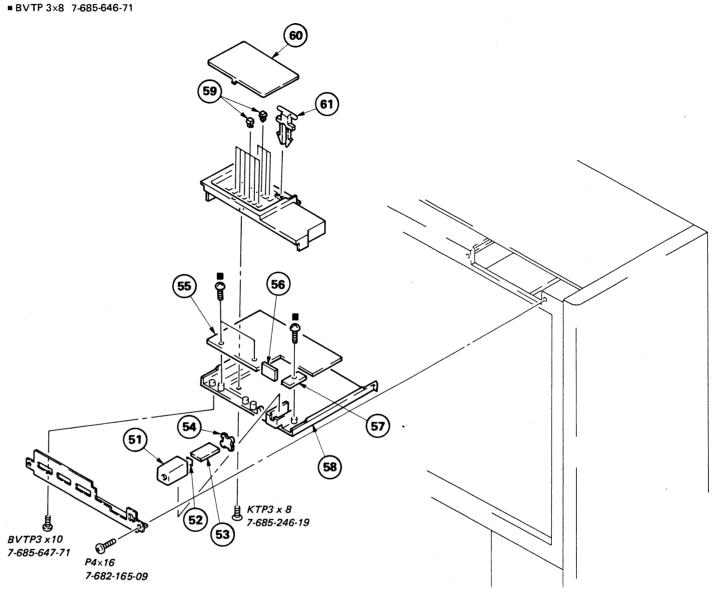
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

5-2. CONTROL PANEL

5-3. SPEAKE ■ BVTP 3×8 7-6



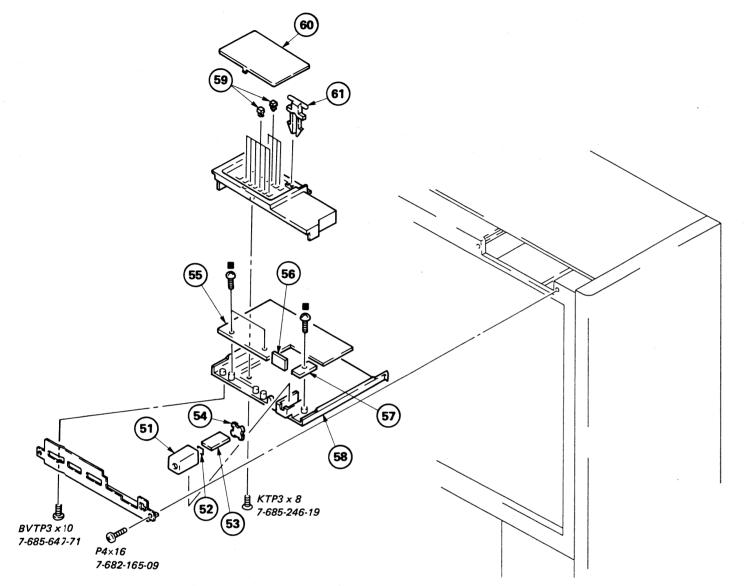




No.	Part No.	Description	Remark	No.	Part No.	Description	Remark	No.	Part No.	Description	Remark	No.	Part No.	Description	Remark	No.	Part No
8	*4-359-616-00 X-4375-434-1 4-375-528-01 4-375-529-01 4-375-432-01 *4-375-451-01 *4-375-437-01	GRILLE ASSY, SPEAKER EMBLEM, SONY FRAME ASSY, SCREEN PLATE (F), DIFFUSION PLATE (L), DIFFUSION MIRROR, REFLECTION COVER, MIRROR COVER (U), BACK COVER (L), BACK	2	İ	3-703-251-00 3-701-910-31 *4-380-295-01 *4-380-852-01	SCREW (M4X25), (+) PWH SCREW (+M4), IT TAPPING SCREW, SPECIAL LABEL, MODEL NUMBER (A), PJ (Serial No.2,000,001 and later) LABEL, MODEL NUMBER (A), PJ (Serial No.7,000,001 and later) SCREW, TAPPING, +PW4X16		52 53 54 55	*4-333-624-00 *1-611-717-11 *4-342-118-00 *A-1371-058-A	CASE, SHIELD (MAIN), R FILM (N), SPECIAL N BOARD LID, SHIELD CASE, R M BOARD, COMPLETE (Serial No.2,000,001 and later) M BOARD, COMPLETE (Serial No.7,000,001 and later)		56   57   58   59   60   61	4-375-403-01	T2 BOARD PANEL (L), CONTROL BUTTON, SUB CONTROL DOOR ASSY, CONTROL		101 102 103 104 105 106	3-703-0

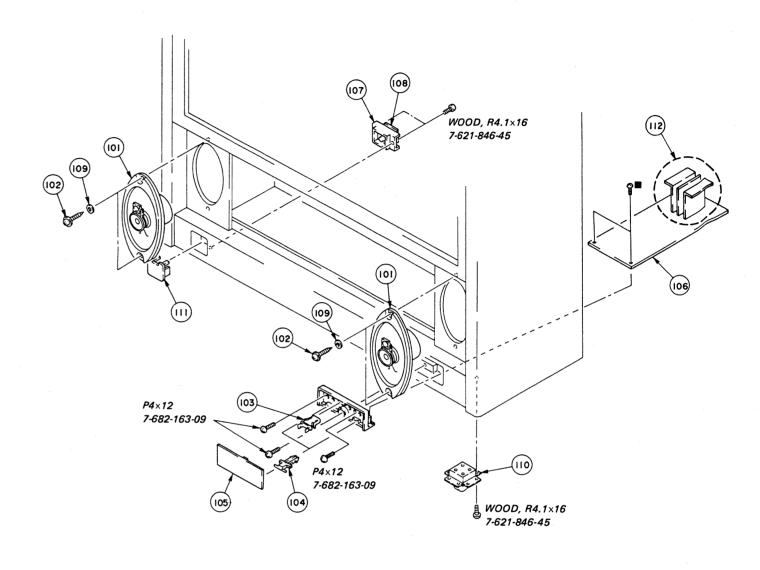
# 5-2. C≪NTROL PANEL

■ BVTP 🕸 8 7-685-646-71



# 5-3. SPEAKER

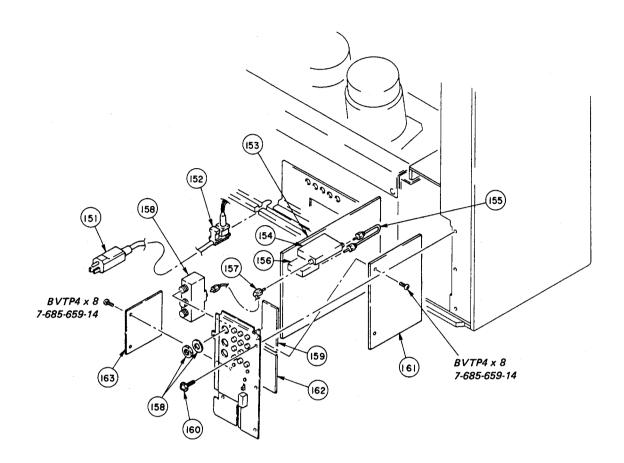
■ BVTP 3×8 7-685-646-71



<u>nark</u>	No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
	52 53 54 55	*4-333-624-00 *1-611-717-11 *4-342-118-00 *A-1371-058-A	CASE, SHIELD (MAIN), R FILM (N), SPECIAL N BOARD LID, SHIELD CASE, R M BOARD, COMPLETE (Serial No.2,000,001 and later) M BOARD, COMPLETE (Serial No.7,000,001 and later)	.	56 57 58 59 60 61	4-375-403-01	T2 BOARD PANEL (L), CONTROL BUTTON, SUB CONTROL DOOR ASSY, CONTROL	

No.	Part No.	<u>Description</u> <u>R</u>	emark	No.	Part No.	Description	Remark
101 102	1-503-601-11 3-701-910-31 4-378-522-01	SCREW, TAPPING, HEXAGON HEAD	d later)	107 108 109 110	1-536-922-11 *1-615-619-11 4-844-815-00 4-346-435-11	Z BOARD WASHER	
103 104 105 106	4-352-034-00 3-703-035-11 X-4375-404-3 *A-1340-804-A *A-1340-844-A	SHAFT, LID DOOR ASSY, REGISTRATION D BOARD, COMPLETE (Serial No.2,000,001 and later)		110	*4-375-538-01	CAP, AV TERMINAL HEAT SINK, AF OUT	

# 5-4. TERMINAL BOARD



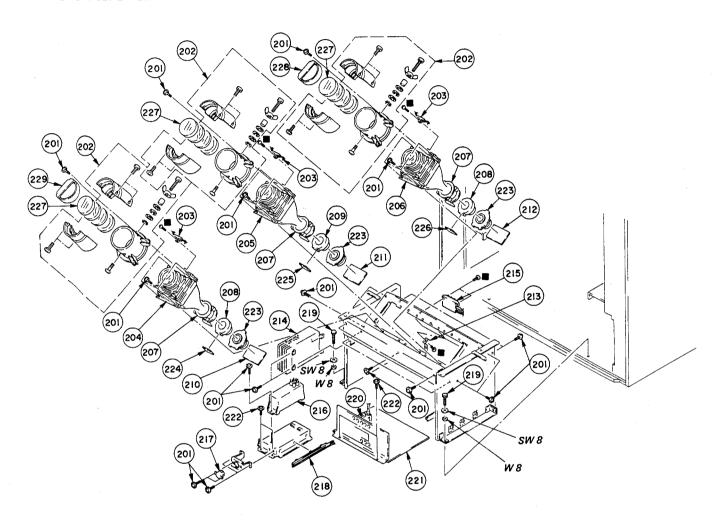
No. Part No.	Description	Remark	No.	Part No.	Description			Remark
152 A.4-375-449-01 153 *A-1296-147-A	A BOARÓ, COMPLETE (Serial No.2,000,001 and later) A BOARD, COMPLETE		159   160	*1-615-618-11 3-701-910-31 *A-1275-074-A	SCREW, SPECIAL U BOARD, COMPLETE (Serial No.2,000,001			
155 *1-551-382-00	SYNTHÉSIZER UNIT, FREQUENCY		162 163	*1-618-588-11	U BOARD, COMPLETE (Serial No.7,000,001 WA BOARD WB BOARD, COMPLETE	and	later)	

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

# 5-5. CHASSIS

■ BVTP 3×8 7-685-646-71 W8 7-688-007-12 SW8 7-623-214-22



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
201		SCREW (+M4), IT TAPPING	į	217	1-509-841-12	OUTLET; AC BOOKEN A DAMENTED AND	e di
202	4-375-447-03	LENS (DEV.B), DELTA 16-00			*4-024-014-00		
203	⚠. 1-570-258-21	SWITCH, THERMAL REED	* .	219	4-359-607-00	SCREW, FIXED, CHASSIS	
204	A 0 727 EE2 OE	CDT /CD 17//DII		220	<b>1-439-366-12 1-439-366-12</b>	TRANSFORMER ASSY, FLYBACK	
205	A. 8-737-551-05	CRT (SD-174(G))		221	*A-1345-624-A	E BOARD, COMPLETE	
206	A. 8-737-553-05	CRT (SD-174(G)) CRT (SD-174(R))	1 1 1 1			(Serial No.2,000,001 and later)	
207	A. 1-451-269-12	DEFLECTION YOKE (SY-174)			*A-1345-635-A	E BOARD, COMPLETE	
208	A 1-452-361-12	NECK ASSY, CRT (NA365)				(Serial No.7,000,001 and later)	
		NECK ASSY, CRT (NA365)		222	3-701-810-61	SCREW, TERMINAL	
210	*1-615-625-11					CRT NÉCK ASSY (362)	
	*1-615-624-11			224	*1-618-357-11	XB BOARD	
	*1-615-623-11			225	*1-618-356-11		
				226			
		SWITCHING REGULATOR (TK-10)		227			
		RESISTOR ASSY, HIGH-VOLTAGE		228			
		DC BLOCK, HIGH-VOLTAGE		229			
۷10	₩. 1-422-033-11	DC DCOCK, HIGH-VOLINGE		1 223	4-3, 3-302-11	ricien, ceno	

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

# **SECTION 6 ELECTRICAL PARTS LIST**



### NOTE:

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified. 

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- CAPACITORS ۰ MF : بربر F, PF : بربر

When indicating parts by reference number, please include the board name.

- RESISTORS
- All resistors are in ohms
   F: nonflammable
- COILS • MMH : mH, UH : باH
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The components identified by  $\blacksquare$  in this parts list have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Ref.No. Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
*A-1275-074-A *A-1275-078-A		,000,001 and			C8063	1-123-330-00 1-123-333-00 1-101-005-00 1-101-001-00	ELECT ELECT CERAMIC CERAMIC	22MF 100MF 0.022MF 0.001MF	20% 20%	25V 16V 50V 50V
	(Serial No.7	,000,001 and				1-123-333-00	ELECT	100MF	20%	160
CAP	ACITOR					1-101-005-00 1-123-356-00	CERAMIC ELECT	0.022MF 10MF	20%	50V 16V
<u>5717 - </u>						1-108-381-91	MYLAR	0.022MF	10%	100v
C8001 1-123-318-00	ELECT	33MF 2	20%	16V		1-106-196-00	MYLAR	0.01MF	10%	100V
C8002 1-123-318-00	ELECT	33MF 2	20%	16V		1-123-356-00	ELECT	10MF	20%	1 6V
C8003 1-123-318-00	ELECT			16V						
C8004 1-123-318-00	ELECT			16V		1-123-356-00	ELECT	10MF	20%	16V
C8005 1-123-356-00	ELECT	10MF	20%	160	C8815	1-123-369-00	ELECT	4.7MF	20%	5 OV
C9006 1 101 005 00	CEDANIC	0.00045		F 011	C8816	1-123-356-00	ELECT	10MF	20%	1 6V
C8006 1-101-005-00	CERAMIC	0.022MF		50V		1-123-356-00	ELECT	10MF	20%	1 60
C8007 1-123-356-00 C8008 1-123-311-00	ELECT			16V	C8819	1-130-309-00	FILM	0.033MF	5 <b>%</b>	100V
C8008 1-123-311-00 C8011 1-102-963-00	ELECT CERAMIC			10V 50V	1 00000	1 122 256 00	CL CCT	1045	204	1.04
C8024 1-102-971-00	CERAMIC			50V 50V	C8820   C8821	1-123-356-00 1-130-279-00	ELECT FILM	10MF 0.0018MF	20 <b>%</b> 5 <b>%</b>	1 6V 1 00V
00024 1-102-9/1-00	CERAMIC	0277	J /6	301		1-123-380-00	ELECT	1MF	20%	500
C8025 1-101-880-00	CERAMIC	47PF 5	5 <b>%</b>	50V		1-123-356-00	ELECT	10MF	20%	1 6V
C8026 1-123-356-00	ELECT			16V	C8824	1-102-125-00	CERAMIC	0.0047MF	10%	5 OV
C8027 1-123-356-00	ELECT			16V			02.0.4110	0.0017111	20%	001
C8028 1-101-005-00	CERAMIC	0.022MF		50V	C8825	1-123-356-00	ELECT	10MF	20%	1 6V
C8030 1-101-005-00	CERAMIC	0.022MF		50V	C8826	1-123-323-00	ELECT	470MF	20%	1 6V
					C8827	1-123-356-00	ELECT	10MF	20%	5 OV
C8031 1-101-005-00	CERAMIC	0.022MF		50V		1-108-373-91	MYLAR	0.0047MF	10%	100V
C8032 1-123-380-00	ELECT			50 <b>V</b>	C8829	1-123-356-00	ELECT	10MF	20%	1 <b>6V</b>
C8033 1-123-380-00	ELECT			50V						
C8034 1-123-380-00	ELECT			50V		1-123-308-00	ELECT	220MF	20%	1 O V
C8035 1-123-380-00	ELECT	1MF 2	20%	50 <b>v</b>		1-130-281-00	FILM	0.0022MF	5%	1 00V
C8036 1-123-380-00	ELECT	1MF 2	20%	50 <b>V</b>		1-131-343-00	TANTALUM	0.22MF	10%	35V
C8037 1-123-380-00	ELECT			50V 50V	C8834   C8835	1-131-343-00 1-130-281-00	TANTALUM FILM	0.22MF 0.0022MF	10% 5%	35V 100V
C8038 1-123-380-00	ELECT			50 <b>v</b>	1 (0000)	1-130-201-00	r I CPI	0.002211	36	1004
C8039 1-123-380-00	ELECT			50V	C8836	1-123-356-00	ELECT	10MF	20%	1 <b>6</b> V
C8040 1-123-380-00	ELECT			50V		1-123-380-00	ELECT	1MF	20%	5 OV
						1-130-281-00	FILM	0.0022MF	5%	100v
C8041 1-123-380-00	ELECT	1MF 2	20%	50V	C8839	1-123-356-00	ELECT	10MF	20%	1 <b>6</b> V
C8042 1-101-005-00	CERAMIC	0.022MF		50V	C8840	1-130-285-00	FILM	0.0033MF	5%	1 <b>00V</b>
C8043 1-101-005-00	CERAMIC	0.022MF		50V	1					
C8044 1-123-333-00	ELECT			16V	C8841	1-130-285-00	FILM	0.0033MF	5%	100V
C8045 1-123-356-00	ELECT	10MF 2	20%	25 <b>V</b>	C8842	1-131-345-00	TANTALUM	0.47MF	10%	3 5 V
C8046 1-123-356-00	ELECT	10ME /	20%	254		1-130-309-00 1-130-285-00	FILM	0.033MF	5%	1000
C8047 1-123-380-00	ELECT ELECT			25 <b>V</b> 50 <b>V</b>	C8844	1-130-285-00	FILM FILM	0.0033MF 0.0033MF	5% 5%	100V 100V
C8048 1-123-380-00	ELECT			50 <b>v</b>	1 60043	1-130-203-00	FILM	0.0033MF	3%	1004
C8049 1-123-318-00	ELECT			16V	C8846	1-131-371-00	TANTALUM	10MF	10%	160
C8050 1-108-591-00	MYLAR			50V	•	1-123-332-00	ELECT	47MF	20%	160
			- 0,0	•••		1-108-622-91	MYLAR	0.0047MF	10%	100v
C8051 1-108-825-91	MYLAR	0.001MF 1	10%	50V		1-123-380-00	ELECT	1MF	20%	5 OV
C8052 1-108-825-91	MYLAR	0.001MF 1	10%	50V	C8850	1-123-380-00	ELECT	1MF	20%	5 OV
C8053 1-108-591-00	MYLAR			50V						
C8054 1-123-325-00	ELECT			160		1-123-330-00	ELECT	22MF	20%	1 <b>6</b> V
C8055 1-101-001-00	CERAMIC	0.001MF		50V		1-123-382-00	ELECT	3.3MF	20%	5 OV
C9056 1 101 001 00	CEDAMIC	0.00145		r Ou		1-123-356-00	ELECT	10MF	20%	5 OV
C8056 1-101-001-00 C8058 1-101-001-00	CERAMIC	0.001MF 0.001MF		50V	C8854	1-123-380-00	ELECT	1MF	20%	5OV
C8058 1-101-001-00 C8059 1-123-381-00	CERAMIC ELECT			50 <b>v</b> 50 <b>v</b>	60000	1-123-382-00	ELECT	3.3MF	20%	5 <b>O</b> V
C8060 1-101-005-00	CERAMIC	0.022MF		50 <b>v</b> 50 <b>v</b>	   C885 <b>6</b>	1-108-622-91	MYLAR	0.0047MF	10%	1 <b>0</b> 0V
C8061 1-123-330-00	ELECT			25V		1-131-368-00	TANTALUM	3.3MF	10%	1 <b>6</b> 0
1 120-000			- ~ 10			1-130-297-00	FILM	0.01MF	5%	100V
					,				2 /0	

# (PR-4620 M-730



Ref.No. Part No.	Description	Remark	Ref.No.	Part No.	Description			Remark
C8870 1-101-005-00	CERAMIC 0.022MF	50V	Q8040		TRANSISTOR 2SA1 TRANSISTOR 2SA1			
<u>D10</u>	DE	50 <b>V</b>	Q8041   Q8042   08044	8-729-178-54	TRANSISTOR 2SC2 TRANSISTOR 2SC2 TRANSISTOR 2SC2	785		
D8004 8-719-911-19 D8008 8-719-911-19	DIODE 1SS119 DIODE 1SS119		Q8045	8-729-900-36	TRANSISTOR DTC1			
D8009 8-719-911-19	DIODE 1SS119 DIODE 1SS119		Q8046 Q8047	8-729-178-54	TRANSISTOR 2SC2 TRANSISTOR 2SC2	785		
D8013 8-719-911-19	DIODE 1SS119		Q8830   Q8831	8-729-178-54	TRANSISTOR 2SC2 TRANSISTOR 2SC2	785		
D8014 8-719-911-19 D8015 8-719-911-19 D8016 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119		Q8872     08873		TRANSISTOR 2SA1 TRANSISTOR 2SC2			
D8016 8-719-911-19 D8017 8-719-911-19 D8018 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119		00073		SISTOR	, 00		
	DIODE RD6.2E-N1		i   R8001		CARBON 1	K 59		
D8023 8-719-102-73 D8030 8-719-200-02	DIODE RD6.2E-N1 DIODE 10E2		R8002   R8003	1-249-419-11	CARBON 1	.5K 59	6 1/6W	
D8820 8-719-102-88 D8821 8-719-102-74	DIODE RD9.1E-N3 DIODE RD6.2E-N2			1-249-405-11 1-249-417-11		00 59 K 59		
<u>IC</u>	IC TC4052BP IC UPD4053BC IC CX794B IC UPD4051BC IC UPD4051BC IC UPD4051BC IC CX10026 IC M5218L IC CX20112 IC AN6291 IC UPC4558C		R8006	1-249-417-11 1-247-823-00		K 59		
IC8001 8-759-240-52	IC TC4052BP		R8008   R8009	1-249-417-11	CARBON 1	K 59	% 1/6W	
IC8005 8-757-948-00 IC8006 8-759-140-51	IC CX7948 IC UPD4051BC		R8010	1-247-859-00		.5K 5%		
IC8007 8-759-140-51	IC UPD4051BC		R8011   R8012	1-247-857-00 1-247-823-00	CARBON 4	.2K 5%	% 1/6W	
IC8008 8-759-907-16 IC8009 8-759-600-02	IC CX10026 IC M5218L		R8013   R8014	1-249-429-11 1-247-804-00 1-249-441-11	CARBON 7	.0К 55 25 55 .00К 55	% 1/6W	
IC8810 8-752-011-20 IC8811 8-759-400-88 IC8812 8-759-145-58	IC CA20112 IC AN6291 IC UPC4558C		R8024	1-249-419-11		.5K 59		
CO12 8-737-143-38	II.	•	R8025   R8035	1-247-799-00 1-249-433-11	CARBON 4	7 59 22K 59	% 1/6W	
L8801 1-408-242-00	MICRO INDUCTOR 10MMH		R8059	1-249-433-11 1-249-425-11	CARBON 2	2K 59		
TRA	TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SA1175 TRANSISTOR 2SC2785		   R8061	1-249-433-11		2K 55		
Q8001 8-729-117-54	TRANSISTOR 2SA1175		R8062	1-249-425-11 1-249-417-11	CARBON 1	.K 5:	% 1/6W	
Q8002 8-729-117-54 Q8003 8-729-117-54	TRANSISTOR 2SA1175 TRANSISTOR 2SA1175		R8066   R8091	1-247-823-00 1-249-417-11		.K 5		
Q8004 8-729-117-54 Q8005 8-729-117-54	TRANSISTOR 2SA1175		R8093	1-249-417-11 1-249-433-11		K 5'		
Q8006 8-729-178-54	TRANSISTOR 2SC2785		R8095	1-247-903-00 1-249-432-11	CARBON 1	M 5'	% 1/6W	
Q8008 8-729-168-82 Q8011 8-729-178-54 Q8021 8-729-178-54	TRANSISTOR 2SC2785		R8097	1-249-435-11		33K 5		
Q8022 8-729-178-54	TRANSISTOR 2SC2785			1-249-429-11 1-249-429-11		LOK 5°		
Q8023 8-729-178-54 Q8025 8-729-900-36			R8100	1-249-417-11 1-249-405-11	CARBON ]	lK 5 100 5		
Q8032 8-729-178-54	TRANSISTOR 2SC2785			1-249-405-11		100 5		
Q8033 8-729-900-36 Q8036 8-729-178-54				1-249-433-11 1-249-433-11		22K 5 22K 5		
	TRANSISTOR 2SA1175 TRANSISTOR 2SA1175		R8108	1-249-433-11 1-249-433-11	CARBON	22K 5 22K 5	% 1/6W	
	TRANSISTOR 2SA1175			1-249-433-11		22K 5		



Ref.No. Part No.	Description			Remark	Ref.No.	Part No.	Description				Remark
R8111 1-249-433-11 R8112 1-249-433-11 R8113 1-249-441-11 R8114 1-249-433-11 R8115 1-249-441-11	CARBON CARBON CARBON CARBON CARBON	22K 55 22K 55 100K 55 22K 55 100K 55	% 1/6W % 1/6W % 1/6W		R8173   R8174   R8175   R8176   R8177	1-249-441-11 1-249-441-11 1-249-425-11 1-249-425-11 1-249-425-11	CARBON CARBON CARBON CARBON CARBON	100K 100K 4.7K 4.7K 4.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8116 1-249-433-11 R8117 1-249-441-11 R8118 1-249-433-11 R8119 1-249-441-11 R8120 1-249-441-11	CARBON CARBON CARBON CARBON CARBON	22K 55 100K 55 22K 56 100K 55 100K 55	% 1/6W % 1/6W % 1/6W		R8178   R8179   R8180   R8181   R8182	1-249-425-11 1-249-429-11 1-249-429-11 1-249-429-11 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	4.7K 10K 10K 10K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8121 1-249-441-11 R8122 1-249-441-11 R8123 1-249-441-11 R8124 1-249-441-11 R8125 1-249-441-11	CARBON CARBON CARBON CARBON CARBON	100K 5: 100K 5: 100K 5: 100K 5: 100K 5:	% 1/6W % 1/6W % 1/6W		R8188   R8189   R8190   R8200   R8201	1-249-419-11 1-249-425-11 1-249-405-11 1-249-405-11 1-249-425-11	CARBON CARBON CARBON CARBON CARBON	1.5K 4.7K 100 100 4.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8126 1-247-823-00 R8127 1-247-823-00 R8128 1-247-151-00 R8129 1-247-837-00 R8130 1-249-433-11	CARBON	470 5 6.8K 5 1.8K 5	1/6W 1/6W 1/4W 1/6W 1/6W		R8202   R8203   R8208   R8811   R8812	1-249-417-11 1-249-417-11 1-249-419-11 1-249-417-11 1-249-419-11	CARBON CARBON CARBON CARBON CARBON	1K 1K 1.5K 1K 1.5K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8131 1-249-437-11 R8132 1-249-433-11 R8133 1-249-437-11 R8134 1-249-405-11 R8137 1-249-437-11	CARBON CARBON CARBON CARBON CARBON	22K 5 47K 5 100 5	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W		R8813   R8814   R8815   R8816   R8817	1-249-417-11 1-249-417-11 1-249-429-11 1-249-441-11 1-215-470-00	CARBON CARBON CARBON CARBON METAL	1K 1K 10K 100K 110K	5% 5% 5% 5% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8139 1-249-429-11 R8140 1-247-823-00 R8141 1-249-441-11 R8142 1-247-823-00 R8143 1-249-441-11	CARBON CARBON	470 5 100K 5 470 5	1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		R8818   R8819   R8820   R8821   R8822	1-215-470-00 1-247-819-00 1-247-873-00 1-247-873-00 1-249-414-11	METAL CARBON CARBON CARBON CARBON	110K 330 56K 56K 56O	1% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8144 1-249-417-11 R8145 1-249-415-11 R8146 1-249-417-11 R8147 1-249-415-11 R8148 1-249-421-11	CARBON CARBON CARBON	680 5 1K 5 680 5	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		   R8823   R8824   R8825   R8826   R8827	1-215-430-00 1-247-853-00 1-249-417-11 1-249-429-11 1-213-129-00	METAL CARBON CARBON CARBON METAL OXIDE	2.4K 8.2K 1K 10K 68	1% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1W	F
R8149 1-249-421-11 R8150 1-249-421-11 R8151 1-249-421-11 R8152 1-249-429-11 R8154 1-249-429-11	CARBON CARBON CARBON	2.2K 5 2.2K 5 10K 5	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		R8828   R8830   R8831   R8832   R8834	1-249-425-11 1-247-903-00 1-247-843-00 1-247-700-11 1-249-435-11	CARBON CARBON CARBON CARBON CARBON	4.7K 1M 3.3K 100 33K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/4W 1/6W	
R8155 1-249-429-11 R8160 1-249-417-11 R8162 1-247-804-00 R8163 1-247-804-00 R8164 1-247-804-00	CARBON CARBON CARBON	1K 5 75 5 75 5	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W			1-247-843-00 1-247-885-00 1-247-844-00 1-247-885-00 1-215-421-00	CARBON CARBON CARBON CARBON METAL	3.3K 180K 3.6K 180K 1K	5% 5% 5% 5% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8165 1-249-422-11 R8166 1-247-837-00 R8167 1-249-435-11 R8168 1-249-433-11 R8169 1-249-435-11	CARBON CARBON CARBON	1.8K 5 33K 5 22K 5	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		R8840   R8841   R8842   R8843   R8844	1-247-811-00 1-247-885-00 1-247-848-00 1-247-885-00 1-247-844-00	CARBON CARBON CARBON CARBON CARBON	150 180K 5.1K 180K 3.6K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R8170 1-249-433-11 R8171 1-249-435-11 R8172 1-249-433-11	CARBON	33K 5	5% 1/6W 5% 1/6W 5% 1/6W		   R8845   R8846   R8847	1-247-893-00 1-249-433-11 1-247-843-00	CARBON CARBON CARBON	390K 22K 3.3K	5% 5% 5%	1/6W 1/6W 1/6W	

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Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark	
R8850 R8851 R8852		CARBON CARBON CARBON	3.3K 5% 4.7K 5% 4.7K 5% 4.7K 5%	1/6W 1/4W 1/6W 1/6W		*1-615-618-11 U1 BOARD ********* **************************						
R8854 R8855 R8856	1-249-425-11 1-247-811-00 1-247-869-00 1-247-887-00 1-247-843-00	CARBON CARBON CARBON CARBON CARBON	4.7K 5% 150 5%	1/6W 1/6W 1/6W 1/6W 1/6W			*1-615-619-11	Z BOARD				
			39K 5% 220K 5% 3.3K 5% 390K 5%			  ***********************************						
R8858	1-247-893-00	CARBON					*1-611-717-11	N BOARD *****				
R8862	1-249-429-11 1-247-843-00 1-249-434-11	CARBON CARBON CARBON	10K 5% 3.3K 5% 27K 5%	1/6W 1/6W 1/6W		<u>CAPACITOR</u>						
	VAR	IABLE RESISTOR				C1   C2   C3	1-123-611-00 1-123-613-00 1-102-820-00	ELECT	1MF 3.3MF 330PF	20% 20% 5%	50V 50V 50V	
	1-230-271-00 1-230-271-00 1-228-728-00 1-228-726-00 1-228-724-00	RES, ADJ, CAR RES, ADJ, CAR				C4	1-123-821-00		47MF	20% ′	167	
RV8811		RES, ADJ, CER	ERAMIC CARBON ERAMIC CARBON				<u>D10</u>					
						D1	8-719-110-32	DIODE PH302B				
	1-228-724-00 1-228-724-00 1-228-731-00 1-228-721-00	RES, ADJ, CER RES, ADJ, CER RES, ADJ, CER RES, ADJ, CER	AMIC CARBON	10K 470K 2.2K			<u>IC</u>					
RV8830			RAMIC CARBON			IC1 		IC CX 20106				
	1-228-725-00		RAMIC CARBON					ISTOR	47 50/	1.764		
RV8832	332 1-228-724-00 RES, ADJ, CERAMIC CARBON 10K					R1   R2	1-247-799-00	CARBON	47 5% 4.7 5%	1/6W 1/6W		
		NECTOR 10 Final 15				R3   R4	1-214-784-00 1-249-433-11	METAL CARBON	200K 1% 22K 5%	1/4W 1/6W		
U8002	1-564-440-11 1-564-353-00	PLUG, CONNECTOR PLUG, CONNECTOR	OR (2.5MM)	2P	!P	   ***********************************						
U8004	*1 -564-440-11 *1 -564-353-00 *1 -564-441-11	54-353-00 PLUG, CONNECTOR (2.5MM) 2P				 	*A-1296-147-A	296-147-A A BOARD, COMPLETE (Serial No.2,000,001 and later)				
	*1-564-353-00	143-11 PLUG, CONNECTOR (2.5MM) 7P 141-11 PLUG, CONNECTOR (2.5MM) 5P				   	*A-1296-182-A	A BOARD, COMPLETE				
U8010	*1-564-443-11 *1-564-441-11			5P		i   		(Serial No.7,000,001 and later)				
	L1 *1-564-354-00 PLUG, CONNECTOR (2.5MM) 3P L2 *1-564-353-00 PLUG, CONNECTOR (2.5MM) 2P					CONNECTOR						
	*1-564-440-11 *1-564-441-11	PLUG, CONNECT				A1 A2	*1-564-440-11 *1-564-446-11					
U8015	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 5P PLUG, CONNECTOR (2.5MM) 3P 1P PLUG					*1-508-766-00 *1-564-440-11	4P PLUG (M)				
CRYSTAL						A7     A8	*1-564-443-11	•				
X8001	1-527-396-00	OSCILLATOR, CRYSTAL				A9	*1-564-441-11 *1-564-354-00	PLUG, CONNEC PLUG, CONNEC	TOR (2.5MM)	5P		
						A11   A13	*1-564-440-11 *1-564-441-11	PLUG, CONNECTOR (2.5MM) 4P PLUG, CONNECTOR (2.5MM) 5P				
						A14	*1-564-446-11	PLUG, CONNEC				
						A15	*1-564-440-11 *1-564-353-00	PLUG, CONNEC PLUG, CONNEC	TOR (2.5MM)	4P		
						A19   A21	*1-564-353-00 *1-564-354-00	PLUG, CONNEC PLUG, CONNEC	TOR (2.5MM)	2P		



Ref.No. Part No.	Description		Remark	Ref.No.	Part No.	Description			Remark
A22 *1-564-354-00 A23 *1-564-354-00 CAP	PLUG, CONNECTOR (2. PLUG, CONNECTOR (2. PACITOR			C155   C156   C157   C158   C159	1-102-074-00 1-123-356-00 1-123-380-00 1-108-618-91 1-102-824-21	CERAMIC ELECT ELECT MYLAR CERAMIC	0.001MF 10MF 1MF 0.0022MF 470PF	10% 20% 20% 10% 5%	50V 16V 50V 100V 50V
C101 1-102-816-00 C102 1-102-816-00 C103 1-102-074-00 C104 1-123-447-00 C106 1-123-380-00	CERAMIC 120PF CERAMIC 120PF CERAMIC 0.001M ELECT 0.22MF ELECT 1MF		50V 50V 50V 50V 50V	C190   C201   C202   C203   C204	1-123-380-00 1-102-121-00 1-102-128-21 1-102-851-00 1-102-525-00	ELECT CERAMIC CERAMIC CERAMIC CERAMIC	1MF 0.0022MF 0.0082MF 15PF 68PF	20% 10% 10% 5% 5%	50V 50V 50V 50V 50V
C107 1-123-318-00 C108 1-101-001-00 C110 1-123-381-00 C111 1-123-381-00 C112 1-123-381-00	ELECT 33MF CERAMIC 0.001M ELECT 2.2MF ELECT 2.2MF ELECT 2.2MF	20% F 20% 20% 20%	16V 50V 50V 50V 50V	C205   C206   C207   C208   C209	1-123-318-00 1-123-318-00 1-101-884-00 1-161-059-00 1-102-824-21	ELECT ELECT CERAMIC CERAMIC CERAMIC	33MF 33MF 56PF 0.047MF 470PF	20% 20% 5% 10% 5%	16V 16V 50V 25V 50V
C113 1-102-976-00 C114 1-102-976-00 C116 1-123-369-00 C117 1-101-880-00 C118 1-101-884-00	CERAMIC 180 PF CERAMIC 180 PF ELECT 4.7 MF CERAMIC 47 PF CERAMIC 56 PF	5% 5% 20% 5%	50V 50V 25V 50V 50V	C211   C212   C213   C214   C215	1-102-121-00 1-101-004-00 1-161-059-00 1-102-121-00 1-102-121-00	CERAMIC CERAMIC CERAMIC CERAMIC CERAMIC	0.0022MF 0.01MF 0.047MF 0.0022MF 0.0022MF	10% 10% 10% 10%	50V 50V 25V 50V 50V
C119 1-102-976-00 C120 1-102-976-00 C121 1-108-622-91 C122 1-101-004-00 C123 1-123-356-00	MYLAR 0.0047	5% 5% 10% 20%	50V 50V 100V 50V 16V	C216   C217   C218   C219   C220	1-102-525-00 1-123-586-00 1-123-586-00 1-102-634-11 1-102-637-00	CERAMIC ELECT ELECT CERAMIC CERAMIC	68PF 0.1MF 0.1MF 8PF 12PF	5% 20% 20% 0.5PF 5%	50V 50V 50V 50V 50V
C124 1-123-356-00 C125 1-123-380-00 C126 1-123-380-00 C127 1-123-380-00 C128 1-123-380-00	ELECT 1MF	20% 20% 20% 20% 20%	50V 50V 50V 50V 50V	C221   C222   C223   C226   C228	1-161-013-00 1-123-379-00 1-123-356-00 1-102-121-00 1-123-330-00	CERAMIC ELECT ELECT CERAMIC ELECT	0.01MF 0.47MF 10MF 0.0022MF 22MF	10% 20% 20% 10% 20%	25V 50V 16V 50V 16V
C129 1-123-333-00 C130 1-124-555-00 C131 1-123-318-00 C132 1-101-003-00 C133 1-101-003-00	ELECT 1000MF ELECT 33MF CERAMIC 0.0047	20% MF	16V 16V 16V 50V 50V	C231   C232   C233   C234   C235	1-102-121-00 1-102-959-00 1-102-959-00 1-123-379-00 1-123-379-00	CERAMIC CERAMIC CERAMIC ELECT ELECT	0.0022MF 22PF 22PF 0.47MF 0.47MF	10% 5% 5% 20% 20%	50V 50V 50V 50V 50V
C134 1-123-333-00 C135 1-101-003-00 C137 1-123-356-00 C138 1-123-356-00 C139 1-123-356-00	CERAMIC 0.0047 ELECT 10MF ELECT 10MF	20% MF 20% 20% 20%	16V 50V 16V 16V 16V	C236   C237   C238   C239   C240	1-123-318-00 1-102-121-00 1-123-381-00 1-102-752-91 1-124-005-11	ELECT CERAMIC ELECT CERAMIC ELECT	33MF 0.0022MF 2.2MF 30PF 4.7MF	20% 10% 20% 5% 20%	16V 50V 50V 50V
C140 1-101-001-00 C141 1-101-002-00 C142 1-106-190-00 C143 1-123-309-00 C144 1-101-004-00	CERAMIC 0.0022 MYLAR 0.0056 ELECT 330MF	MF 10% 20%	50V 50V 100V 10V 50V	C241   C241   C243   C244   C245   C246	1-102-973-00 1-102-816-00 1-123-318-00 1-123-333-00 1-123-318-00	CERAMIC CERAMIC ELECT ELECT	100PF 120PF 33MF 100MF 33MF	5% 5% 20% 20%	50V 50V 16V 16V 16V
C145 1-101-004-00 C146 1-123-333-00 C147 1-101-001-00 C149 1-101-004-00 C150 1-101-004-00	ELECT 100MF CERAMIC 0.001M CERAMIC 0.01MF	20% IF	50V 16V 50V 50V 50V	C247   C247   C248   C249   C250   C251	1-123-333-00 1-102-074-00 1-123-380-00 1-123-318-00 1-123-333-00	ELECT CERAMIC ELECT ELECT ELECT	100MF 0.001MF 1MF 33MF 100MF	20% 10% 20% 20% 20%	16V 50V 50V 16V
C151 1-119-135-00 C152 1-123-356-00 C153 1-123-333-00 C154 1-123-356-00	ELECT 10MF ELECT 100MF	20% 20% 20%	16V 16V 16V 16V	C301   C302   C303	1-123-356-00 1-102-965-00 1-101-884-00	ELECT CERAMIC CERAMIC	10MF 39 PF 56 PF	20% 5% 5%	16V 50V 50V



Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
C304 C305 C306 C307 C308	1-123-380-00 1-123-380-00 1-123-356-00 1-123-369-00 1-102-129-00	ELECT ELECT ELECT ELECT CERAMIC	1MF 1MF 10MF 4.7MF 0.01MF	20% 20% 20% 20% 10%	50V 50V 25V 25V 50V	C503   C504   C506   C507	1-102-117-00 1-123-356-00 1-102-117-00 1-123-356-00	ELECT CERAMIC	820PF 10MF 820PF 10MF	10% 20% 10% 20%	50V 25V 50V 25V
C309 C310 C311 C312 C313	1-102-973-00 1-123-330-00 1-161-047-00 1-123-447-00 1-123-447-00	CERAMIC ELECT CERAMIC ELECT ELECT	100 PF 22MF 0.004 7MF 0.22MF 0.22MF	5% 20% 10% 20% 20%	50V 16V 50V 50V 50V	CF202	1-409-332-00 1-527-943-00 1-404-227-51	FILTER, CERA SAWF 45MHZ			·
C314 C315 C316 C317 C318	1-101-004-00 1-123-356-00 1-101-888-00 1-102-865-00 1-102-074-00	CERAMIC ELECT CERAMIC CERAMIC CERAMIC	0.01MF 10MF 68PF 8PF 0.001MF	20% 5% 0.5PF 10%	50V 16V 50V 50V 50V	CV316	TRI 1-141-147-XX <u>DIO</u>	,	₹		
C319 C320 C321 C322	1-123-379-00 1-124-006-11 1-123-379-00 1-123-286-00	ELECT ELECT ELECT ELECT	0.47MF 10MF 0.47MF 0.33MF	20% 20% 20% 20% 20%	50V 25V 50V 50V 50V	D101   D102   D103   D104   D108	8-719-911-19 8-759-157-40 8-719-102-60 8-719-102-60 8-719-911-19	IC UPC574J DIODE RD3.91 DIODE RD3.91	E-N2 E-N2		
C323 C324 C325 C326 C328	1-123-379-00 1-123-357-00 1-123-380-00 1-102-949-00 1-161-265-00	ELECT CERAMIC CERAMIC	0.47MF 22MF 1MF 12PF 33PF	20% 20% 5% 5%	50V 50V 50V 50V	D109 D110 D111 D111 D112	8-719-911-19 8-719-911-19 8-719-102-65 8-719-101-04 8-719-102-70	DIODE 1SS119 DIODE RD4.7	9 E-N2 -B2		
C330 C331 C332 C333 C334	1-123-333-00 1-101-888-00 1-102-965-00 1-124-475-11 1-123-380-00	CERAMIC CERAMIC ELECT ELECT	100MF 68PF 39PF 470MF 1MF	20% 5% 5% 20% 20%	16V 50V 50V 16V 50V	D119 D200 D202 D203 D204	8-719-911-19 8-719-102-70 8-719-911-19 8-719-102-91 8-719-103-06	DIODE 1SS119 DIODE RD5.60 DIODE 1SS119 DIODE RD10E DIODE RD13E	E-N1 9 -N3		
C338 C339 C340 C350 C351	1-102-965-00 1-102-942-00 1-124-555-00 1-161-059-00 1-102-973-00	CERAMIC CERAMIC ELECT CERAMIC CERAMIC	39 PF 5 PF 1000MF 0.04 7 MF 100 PF	5% 0.5PF 20% 10% 5%	50V 50V 16V 25V 50V	D205 D251 D405 D406 D411	8-719-911-19 8-719-102-71 8-719-911-19 8-719-911-19 8-719-911-19	DIODE RD5.60 DIODE 1SS119 DIODE 1SS119	E-N2 9 9		
C401	1-124-006-11	ELECT	10MF	20%	25V		DEL	AY LINE			
C402 C403 C404 C405 C406	1-124-006-11 1-124-006-11 1-124-555-00 1-101-003-00 1-123-379-00	ELECT ELECT ELECT CERAMIC ELECT	10MF 10MF 1000MF 0.0047MF 0.47MF	20% 20% 20% 20%	25V 25V 16V 50V 50V		1-415-356-11 1-415-388-11 <u>IC</u>				
C407 C408 C410 C411 C412	1-123-379-00 1-123-379-00 1-101-004-00 1-123-356-00 1-123-369-00	ELECT ELECT CERAMIC ELECT ELECT	0.47MF 0.47MF 0.01MF 10MF 4.7MF	20% 20% 20% 20%	50V 50V 50V 50V 50V	IC102 IC103 IC104	8-759-103-07 8-759-800-65 8-759-912-82 8-759-909-50 8-759-240-71	IC LA7910 IC CX530-50 IC CX7958			
C413 C417 C419 C421 C426	1-108-620-91 1-124-002-11 1-123-332-00 1-123-380-00 1-123-356-00	MYLAR ELECT ELECT ELECT ELECT	0.0033MF 1MF 47MF 1MF 10MF	10% 20% 20% 20% 20%	100V 50V 16V 50V 16V	IC106   IC107   IC201   IC202   IC301	8-752-320-11 8-759-102-28 8-752-001-41 8-752-013-90 8-758-480-00	IC CXK1001P IC UPD6326C IC CX20014A IC CX20139 IC CX848			
C450 C500 C501	1-102-125-00 1-102-117-00 1-123-356-00	CERAMIC CERAMIC ELECT	0.0047MF 820PF 10MF	10% 10% 20%	50V 50V 25V	IC302	8-759-913-11 8-752-010-00	IC CX20125 IC CX20100			



Ref.No. Part No.	Description	Remark	Ref.No.	Part No.	Description			Remark
CO L101 1-407-717-00 L102 1-404-538-11 L103 1-408-431-31	MICRO INDUCTOR 1MMH COIL MICRO INDUCTOR 1.2UH MICRO INDUCTOR 3.3UH MICRO INDUCTOR 3.3UH		Q123   Q124   Q125   Q126   Q127	8-729-178-54 8-729-178-54 8-729-117-54 8-729-178-54 8-729-178-54	TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC	02785 41175 02785		
	MICRO INDUCTOR 3.30H		Q128   Q201	8-729-178-54 8-729-266-93 8-729-117-54	TRANSISTOR 250 TRANSISTOR 250 TRANSISTOR 250	C2669		
L108 1-410-016-11 L109 1-410-016-11			Q202   Q204   Q205	8-729-117-54 8-729-117-54 8-729-117-54	TRANSISTOR 25/ TRANSISTOR 25/	C2785		
L112 1-408-454-31	MICRO INDUCTOR 47UH MICRO INDUCTOR 100UH		Q206   Q207   Q208	8-729-178-54 8-729-178-54 8-729-288-02	TRANSISTOR 250 TRANSISTOR 250 TRANSISTOR 251	C2785		
L113 1-408-431-31 L114 1-408-430-31	MICRO INDUCTOR 1.2UH MICRO INDUCTOR 1UH MICRO INDUCTOR 8.2UH		Q209 Q251	8-729-201-78 8-729-288-02	TRANSISTOR 2SI TRANSISTOR 2SI	D1406		
	MICRO INDUCTOR 0.68UH MICRO INDUCTOR 0.22UH		Q301   Q302   Q303	8-729-178-54 8-729-178-54	TRANSISTOR 2SO TRANSISTOR 2SO TRANSISTOR 2SO	C2785 C2785		
L204 1-408-441-31 L205 1-408-445-31 L206 1-408-411-00	MICRO INDUCTOR 8.2UH MICRO INDUCTOR 18UH MICRO INDUCTOR 15UH		Q304   Q305	8-729-178-54 8-729-178-54	TRANSISTOR 250	C2785		
L207 1-408-402-00 L208 1-408-409-00	MICRO INDUCTOR 2.7UH MICRO INDUCTOR 10UH		Q306   Q308   Q309	8-729-178-54 8-729-178-54 8-729-178-54 8-729-178-54	TRANSISTOR 250	C2785 C2785		
L301 1-408-450-31 L302 1-408-449-31 L303 1-404-540-11 L304 1-408-411-00	MICRO INDUCTOR 39UH COL		Q310   Q311 	8-729-178-54 8-729-117-54	TRANSISTOR 250	C2785		
L 305 1-408-431-31 L 306 1-408-431-31	MICRO INDUCTOR 0.68UH  MICRO INDUCTOR 0.22UH  MICRO INDUCTOR 8.2UH  MICRO INDUCTOR 18UH  MICRO INDUCTOR 15UH  MICRO INDUCTOR 2.7UH  MICRO INDUCTOR 10UH  MICRO INDUCTOR 47UH  MICRO INDUCTOR 39UH  COIL  MICRO INDUCTOR 15UH  MICRO INDUCTOR 1.2UH	Q314   Q394   Q403	8-729-115-30 8-729-178-54 8-729-117-54	TRANSISTOR 25	K105A-30 C2785			
L 307 1-408-431-31 L 308 1-408-163-00 L 309 1-408-453-31	MICRO INDUCTOR 1.2UH MICRO INDUCTOR 5.6MMH MICRO INDUCTOR 82UH		Q404 Q405		TRANSISTOR 250	C2785		
L310 1-408-409-00 L311 1-408-409-00 L401 1-408-454-31	MICRO INDUCTOR 1.2UH MICRO INDUCTOR 1.2UH MICRO INDUCTOR 1.2UH MICRO INDUCTOR 5.6MMH MICRO INDUCTOR 82UH  MICRO INDUCTOR 10UH MICRO INDUCTOR 10UH MICRO INDUCTOR 10UH MICRO INDUCTOR 10UH		Q406   Q408   Q411   Q412	8-729-178-54 8-729-178-54 8-729-117-54 8-729-117-54	TRANSISTOR 250 TRANSISTOR 250	C2785 A1175		
	<u>ANSISTOR</u>		Q413	8-729-117-54 8-729-178-54	TRANSISTOR 25/ TRANSISTOR 25/			
Q101 8-729-117-54 Q102 8-729-178-54 Q103 8-729-178-54 Q104 8-729-117-54	TRANSISTOR 2SC2785		Q416   Q417   Q418	8-729-178-54 8-729-178-54 8-729-178-54	TRANSISTOR 250 TRANSISTOR 250 TRANSISTOR 250	C2785		
0105 8-729-178-54	TRANSISTOR 2SC2785		Q419 Q420 Q421	8-729-177-43	TRANSISTOR 2SI TRANSISTOR 2SI TRANSISTOR 2SI	D774		
Q106 8-729-178-54 Q107 8-729-117-54 Q108 8-729-178-54 Q109 8-729-178-54	TRANS1310R 2302/03		Q421 Q422 Q423	8-729-117-54 8-729-117-54	TRANSISTOR 25/ TRANSISTOR 25/	A1175		
Q110 8-729-178-54 Q111 8-729-178-54	TRANSISTOR 2SC2785		Q426 Q430	8-729-117-54 8-729-117-54	TRANSISTOR 25/ TRANSISTOR 25/			
Q113 8-729-117-54 Q114 8-729-117-54	TRANSISTOR 2SA1175			RES	ISTOR			
Q115 8-729-117-54 Q116 8-729-178-54	TRANSISTOR 2SA1175		R14 R15 R16	1-247-135-00 1-249-425-11 1-247-725-11		1.5K 5% 4.7K 5% 10K 5%	1/4W 1/6W 1/4W	
Q118 8-729-178-54	TRANSISTOR 2SC2785		R20	1-249-421-11		2.2K 5%	1/6W	



Ref.No. Part No.	Description			Remark	Ref.No.	Part No.	Description				Remark
R21 1-247-717-11 R22 1-247-717-11 R23 1-247-717-11 R25 1-247-713-11 R26 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	2.2K 5% 2.2K 5% 2.2K 5% 1K 5% 1OK 5%	1/4W 1/4W 1/4W 1/4W 1/6W		R144   R145   R146   R147   R148	1-249-429-11 1-249-441-11 1-247-718-11 1-247-718-11 1-247-718-11	CARBON CARBON CARBON CARBON CARBON	10K 100K 2.7K 2.7K 2.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/4W 1/4W	
R27 1-249-435-11 R28 1-247-713-11 R001 1-247-711-11 R002 1-247-705-11 R003 1-247-705-11	CARBON CARBON	33K 5% 1K 5% 680 5% 270 5% 270 5%	1/6W 1/4W 1/4W 1/4W 1/4W		R149   R150   R151   R152   R153	1-247-719-11 1-247-719-11 1-247-704-11 1-249-437-11 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	3.3K 3.3K 220 47K 10K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/6W 1/6W	
R004 1-247-843-00 R005 1-247-843-00 R006 1-247-163-00 R007 1-247-719-11 R008 1-247-719-11	CARBON CARBON CARBON	3.3K 5% 3.3K 5% 22K 5% 3.3K 5% 3.3K 5%	1/6W 1/6W 1/4W 1/4W 1/4W		R154   R155   R156   R157   R158	1-249-437-11 1-249-437-11 1-247-887-00 1-249-433-11 1-249-437-11	CARBON CARBON CARBON CARBON CARBON	47K 47K 220K 22K 47K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W	
R009 1-247-843-00 R010 1-247-719-11 R012 1-247-704-11 R106 1-249-425-11 R107 1-247-717-11		3.3K 5% 3.3K 5% 220 5% 4.7K 5% 2.2K 5%	1/6W 1/4W 1/4W 1/6W 1/4W		R159   R160   R161   R162   R163	1-247-889-00 1-249-441-11 1-247-713-11 1-247-713-11 1-247-713-11	CARBON CARBON CARBON CARBON CARBON	270K 100K 1K 1K 1K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/4W 1/4W	
R108 1-247-717-11 R109 1-249-429-11 R110 1-249-429-11 R111 1-247-823-00 R112 1-247-885-00	CARBON CARBON	2.2K 5% 10K 5% 10K 5% 470 5% 180K 5%	1/4W 1/6W 1/6W 1/6W 1/6W		R164   R165   R166   R167   R168	1-249-421-11 1-249-421-11 1-247-076-00 1-206-696-00 1-247-717-11	CARBON CARBON CARBON METAL OXIDE CARBON	2.2K 2.2K 2.7 22K 2.2K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 2W 1/4W	F
R113 1-249-429-11 R114 1-249-421-11 R115 1-247-819-00 R118 1-247-713-11 R119 1-249-417-11	CARBON CARBON CARBON CARBON CARBON	10K 5% 2.2K 5% 330 5% 1K 5% 1K 5%	1/6W 1/6W 1/6W 1/4W 1/6W		R169   R170   R171   R174   R175	1-247-725-11 1-247-725-11 1-249-417-11 1-249-429-11 1-247-725-11	CARBON CARBON CARBON CARBON CARBON	10K 10K 1K 10K 10K	5% 5% 5% 5% 5%	1/4W 1/4W 1/6W 1/6W 1/4W	
R120 1-249-437-11 R121 1-249-437-11 R122 1-247-163-00 R123 1-247-717-11 R124 1-247-849-00	CARBON	47K 5% 47K 5% 22K 5% 2.2K 5% 5.6K 5%	1/6W 1/6W 1/4W 1/4W 1/6W		R176   R177   R178   R179   R180	1-247-891-00 1-249-429-11 1-247-717-11 1-247-717-11 1-249-421-11	CARBON CARBON CARBON CARBON CARBON	330K 10K 2.2K 2.2K 2.2K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/4W 1/6W	
R125 1-249-435-11 R126 1-247-851-00 R127 1-249-419-11 R128 1-247-857-00 R129 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	33K 5% 6.8K 5% 1.5K 5% 12K 5% 10K 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R181   R182   R183   R185   R186	1-249-421-11 1-249-421-11 1-249-440-11 1-249-429-11 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	2.2K 2.2K 82K 10K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R130 1-247-167-00 R131 1-247-887-00 R132 1-247-153-00 R133 1-247-873-00 R134 1-247-895-00	CARBON CARBON CARBON	33K 5% 220K 5% 8.2K 5% 56K 5% 470K 5%	1/4W 1/6W 1/4W 1/6W 1/6W		R187   R188   R189   R190   R191	1-249-421-11 1-249-421-11 1-249-421-11 1-249-429-11 1-247-843-00	CARBON CARBON CARBON CARBON CARBON	2.2K 2.2K 2.2K 10K 3.3K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R135 1-247-895-00 R136 1-247-889-00 R137 1-249-421-11 R138 1-247-125-00 R139 1-247-717-11	CARBON CARBON CARBON	470K 5% 270K 5% 2.2K 5% 560 5% 2.2K 5%	1/6W 1/6W 1/6W 1/4W 1/4W		R192   R193   R194   R196   R197	1-249-425-11 1-244-877-51 1-249-437-11 1-249-437-11 1-249-437-11	CARBON CARBON CARBON CARBON CARBON	4.7K 1.5K 47K 47K 47K	5% 5% 5% 5% 5%	1/6W 1/2W 1/6W 1/6W 1/6W	
R140 1-247-717-11 R142 1-247-700-11 R143 1-249-421-11	CARBON	2.2K 5% 100 5% 2.2K 5%	1/4W 1/4W 1/6W		R198   R199   R201	1-249-433-11 1-249-429-11 1-247-837-00	CARBON CARBON CARBON	22K 10K 1.8K	5% 5% 5%	1/6W 1/6W 1/6W	



Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark
R202 R203 R204 R205 R206	1-247-857-00 1-249-429-11 1-215-457-00 1-215-457-00 1-249-433-11	CARBON CARBON METAL METAL CARBON	12K 10K 33K 33K 22K	5% 5% 1% 1% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R316   R317   R318   R319   R320	1-247-833-00 1-249-417-11 1-249-422-11 1-249-422-11 1-249-422-11	CARBON CARBON CARBON CARBON CARBON	1.2K 1K 2.7K 2.7K 2.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R208 R209 R211 R215 R216	1-247-883-00 1-247-883-00 1-249-417-11 1-247-883-00 1-247-815-00	CARBON CARBON CARBON CARBON CARBON	150K 150K 1K 150K 220	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R321 R322 R323 R324 R325	1-247-899-00 1-249-434-11 1-247-145-00 1-247-706-11 1-249-433-11	CARBON CARBON CARBON CARBON CARBON	680K 27K 3.9K 330 22K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/4W 1/6W	
R218 R219 R220 R221 R223	1-247-845-00 1-247-817-00 1-247-801-00 1-247-822-00 1-247-821-00	CARBON CARBON CARBON CARBON CARBON	3.9K 270 56 430 390	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R326   R327   R328   R329   R331	1-247-843-00 1-247-845-00 1-247-829-00 1-249-421-11 1-249-405-11	CARBON CARBON CARBON CARBON CARBON	3.3K 3.9K 820 2.2K 100	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R224 R225 R226 R227 R228	1-247-830-00 1-249-415-11 1-249-405-11 1-249-415-11 1-247-833-00	CARBON CARBON CARBON CARBON CARBON	910 680 100 680 1.2K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R332   R333   R334   R335   R336	1-247-821-00 1-249-433-11 1-247-829-00 1-249-417-11 1-247-897-00	CARBON CARBON CARBON CARBON CARBON	390 22K 820 1K 560K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R229 R230 R231 R232 R234	1-247-803-00 1-247-843-00 1-247-846-00 1-247-851-00 1-249-421-11	CARBON CARBON CARBON CARBON CARBON	68 3.3K 4.3K 6.8K 2.2K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R337   R339   R340   R341   R342	1-247-895-00 1-247-819-00 1-249-437-11 1-247-857-00 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	470K 330 47K 12K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R235 R236 R237 R238 R239	1-247-819-00 1-247-700-11 1-247-795-00 1-249-425-11 1-247-819-00	CARBON CARBON CARBON CARBON CARBON	330 100 33 4.7K 330	5% 5% 5% 5%	1/6W 1/4W 1/6W 1/6W 1/6W		R343   R345   R346   R348   R349	1-247-696-11 1-247-725-11 1-247-704-11 1-247-815-00 1-249-437-11	CARBON CARBON CARBON CARBON CARBON	47 10K 220 220 47K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/6W 1/6W	
R241 R242 R243 R244 R245	1-212-367-00 1-206-495-00 1-247-821-00 1-247-704-11 1-249-417-11	METAL OXIDE METAL OXIDE CARBON CARBON CARBON	3.9 2.2 390 220 1K	5% 5% 5% 5%	1W 3W 1/6W 1/4W 1/6W	F F	R350   R351   R352   R353   R354	1-247-815-00 1-247-829-00 1-247-725-11 1-249-433-11 1-246-537-00	CARBON CARBON CARBON CARBON CARBON	220 820 10K 22K 470K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/6W 1/4W	
R250 R251 R300 R301 R302	1-206-453-00 1-247-706-11 1-249-405-11 1-249-435-11 1-249-434-11	METAL OXIDE CARBON CARBON CARBON CARBON	3.9 330 100 33K 27K	5% 5% 5% 5% 5%	2W 1/4W 1/6W 1/6W 1/6W	F	R356   R357   R359   R360   R361	1-246-517-00 1-247-903-00 1-249-415-11 1-249-415-11 1-247-823-00	CARBON CARBON CARBON CARBON CARBON	68K 1M 680 680 470	5% 5% 5% 5% 5%	1/4W 1/6W 1/6W 1/6W 1/6W	
R 303 R 304 R 305 R 306 R 307	1-247-833-00 1-247-823-00 1-247-833-00 1-249-419-11 1-249-415-11	CARBON CARBON CARBON CARBON CARBON	1.2K 470 1.2K 1.5K 680	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R362   R363   R364   R365   R366	1-247-833-00 1-247-819-00 1-247-833-00 1-247-837-00 1-249-422-11	CARBON CARBON CARBON CARBON CARBON	1.2K 330 1.2K 1.8K 2.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R 308 R 309 R 310 R 311 R 312	1-249-415-11 1-249-415-11 1-249-415-11 1-247-833-00 1-247-833-00	CARBON CARBON CARBON	680 680 680 1.2K 1.2K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R367   R377   R380   R381   R382	1-249-425-11 1-247-823-00 1-249-441-11 1-249-441-11 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	4.7K 470 100K 100K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R313 R314 R315	1-249-419-11 1-249-419-11 1-247-833-00	CARBON	1.5K 1.5K 1.2K	5% 5% 5%	1/6W 1/6W 1/6W		R390   R401   R402	1-247-903-00 1-247-704-11 1-247-704-11	CARBON CARBON CARBON	1M 220 220	5% 5% 5%	1/6W 1/4W 1/4W	



Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description			Remark
R403 R404 R405 R406 R408	1-247-704-11 1-247-849-00 1-249-421-11 1-247-815-00 1-249-421-11	CARBON CARBON CARBON CARBON CARBON	220 5.6K 2.2K 220 2.2K	5% 5% 5% 5% 5%	1/4W 1/6W 1/6W 1/6W 1/6W		R503 R505 R506 R508 R519	1-249-417-11 1-247-845-00 1-247-845-00 1-247-869-00 1-247-833-00	CARBON CARBON CARBON CARBON CARBON	1K 5% 3.9K 5% 3.9K 5% 39K 5% 1.2K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R410 R411 R412 R414 R416	1-247-799-00 1-247-819-00 1-249-417-11 1-249-469-11 1-246-523-00	CARBON CARBON CARBON CARBON CARBON	47 330 1K 100K 120K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/4W 1/4W		R520   R521   R522   R523   R598	1-249-429-11 1-247-859-00 1-249-429-11 1-247-895-00 1-247-805-00	CARBON CARBON CARBON CARBON CARBON	10K 5% 15K 5% 10K 5% 470K 5% 82 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R417 R418 R419 R420 R422	1-247-163-00 1-249-429-11 1-249-469-11 1-249-425-11 1-247-163-00	CARBON CARBON CARBON CARBON CARBON	22K 10K 100K 4.7K 22K	5% 5% 5% 5% 5%	1/4W 1/6W 1/4W 1/6W 1/4W		R599         RV201   RV202	1-214-775-00 <u>VAR</u> 1-228-723-00 1-228-723-00	METAL  IABLE RESISTOR  RES, ADJ, CER RES, ADJ, CER	- RAMIC CARBON		
R423 R424 R425 R426 R427	1-249-437-11 1-247-713-11 1-247-805-00 1-247-177-00 1-214-761-00	CARBON CARBON CARBON CARBON METAL	47K 1K 82 82K 22K	5% 5% 5% 5% 1%	1/6W 1/4W 1/6W 1/4W 1/4W		RV301   RV302   RV303     RV304	1-228-720-00 1-228-719-00 1-228-724-00 1-228-724-00	RES, ADJ, CER RES, ADJ, CER RES, ADJ, CER	RAMIC CARBON RAMIC CARBON RAMIC CARBON RAMIC CARBON	1K 470 10K	
R428 R430 R431 R433 R435	1-247-885-00 1-247-869-00 1-214-753-00 1-249-425-11 1-247-704-11	CARBON CARBON METAL CARBON CARBON	180K 39K 10K 4.7K 220	5% 5% 1% 5% 5%	1/6W 1/6W 1/4W 1/6W 1/4W		RV402   RV403   RV404	1-228-724-00 1-228-724-00 1-228-723-00 1-224-487-00 1-228-721-00	RES, ADJ, CER RES, ADJ, CER RES, ADJ, MET RES, ADJ, CER	RAMIC CARBON RAMIC CARBON TAL FILM 220	10K 4.7K	
R436 R437 R438 R441	1-247-704-11 1-247-145-00 1-214-915-00 1-247-869-00	CARBON CARBON ME TAL CARBON	220 3.9K 120K 39K	5% 5% 1% 5%	1/4W 1/4W 1/2W 1/6W		RV407   RV408	1-228-724-00 1-228-724-00 1-224-487-00	RES, ADJ, CER RES, ADJ, CER RES, ADJ, ME	RAMIC CARBON RAMIC CARBON	10K 10K	
R442 R451 R453 R454 R456 R458	1-247-848-00 1-247-815-00 1-247-799-00 1-247-819-00 1-247-799-00 1-247-696-11	CARBON CARBON CARBON CARBON CARBON CARBON CARBON	5.1K 220 47 330 47 47	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W 1/4W		T201   T202   T203   T204   T205	1-404-541-11 1-404-467-00 1-404-467-00 1-404-505-00 1-404-489-00	COIL, VIF COIL, VIF COIL COIL			·
R460 R461 R462 R463 R465	1-249-425-11 1-247-815-00 1-247-799-00 1-247-819-00 1-247-803-00	CARBON CARBON CARBON CARBON CARBON	4.7K 220 47 330 68	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		T301         TU101 <u>^</u>	1-425-786-00 TUN 1-463-470-00	TRANSFORMER,  IER  TUNER, ET (B' (Serial No.2	T-896)		
R470 R471 R472 R474 R479	1-247-899-00 1-249-429-11 1-247-891-00 1-247-696-11 1-249-425-11	CARBON CARBON CARBON CARBON	680K 10K 330K 47 4.7K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/4W 1/6W		   X101   X102   X301	1-567-192-11 1-567-254-11	OSCILLATOR, OSCILL	CERAMIC CERAMIC		
R486 R487 R488 R490 R493	1-247-815-00 1-247-804-00 1-247-717-11 1-247-163-00 1-249-433-11	CARBON CARBON CARBON	220 75 2.2K 22K 22K	5% 5% 5% 5% 5%	1/6W 1/6W 1/4W 1/4W 1/6W		i	**************************************	CR BOARD	******	*****	** ** ***
R494 R495 R496	1-249-409-11 1-249-409-11 1-249-409-11	CARBON CARBON CARBON	220 220 220	5% 5% 5%	1/6W 1/6W 1/6W	F	     	1-526-812-11 1-556-880-51 *4-026-251-00	LEAD AŚSY, H			

# NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No.	. Part No.	Description				Remark	Ref.No	. Part No.	Description				Remark
	CAP	ACITOR						*1-615-624-11	CG BOARD				
C702 C703 C704 C705 C706	1-123-028-00 1-102-050-00 1-102-155-00 1-102-155-00 1-102-155-00	CERAMIC CERAMIC CERAMIC	2.2MF 0.01MF 330PF 330PF 330PF		20% 20% 20%	350V 500V 2KV 2KV 2KV		1-526-812-11 1-556-880-51 *4-026-251-00	SOCKET, CRT LEAD ASSY, H		TAGE		
C707 C708	1-102-267-00 1-102-121-00		0.0068 0.0022		10%	500V 50V	C722	1-123-028-00	ELECT	2.2MF			350V
	CON	NECTOR					C723   C724	1-102-050-00 1-102-155-00		0.01MF 330PF		20%	500V 2KV
CR1 CR2	*1-564-443-11 *1-564-354-00	PLUG, CONNEC					C725   C726	1-102-155-00 1-102-155-00	CERAMIC	330PF 330PF		20 <b>%</b> 20 <b>%</b>	2KV 2KV
CR3 CR4 CR5	*1-508-786-00 *1-508-784-00 *1-508-784-00	1P PLUG					C727   C728 	1-102-267-00 1-102-121-00		0.0068 0.0022		10%	500V 50V
CR6	*1-508-784-00	1P PLUG						CON	INECTOR				
0.1.0	DIC						CG1 CG2 CG3	*1-564-443-11 *1-564-354-00 *1-508-786-00	PLUG, CONNEC				
D701	8-719-911-19	DIODE 1SS119					CG4	*1-508-784-00 *1-508-784-00	1P PLUG				
	COI	L					CG6						
L701	1-407-364-00	MICRO INDUCT COIL, SPOOK	CHOKE 3	3.3UH			000	*1-508-784-00					
L 703 L 704	1-407-364-00 1-407-694-00	COIL, SPOOK MICRO INDUCT	OR 12UH	1.3UH			D721	8-719-911-19	DIODE 1SS119	)			
	NEC	IN LAMP					<u> </u>	<u>C01</u>	<u>L</u>				
NL 701	1-519-013-13	DISCHARGE TU	BE				   L721	1-407-701-00	MICRO INDUCT	OR 47UH	!		
	TRA	NSISTOR					L722   L723	1-407-364-00 1-407-364-00	COIL, SPOOK	CHOKE 3	.3UH		
Q701	8-729-326-11	TRANSISTOR 2	SC2611				L724 	1-407-694-00	MICRO INDUCT	OR 12UH			
	RES	SISTOR						NEC	N LAMP				
R701	1-247-700-11		100	5%	1/4W		NL721	1-519-013-13	DISCHARGE TU	JBE			
R702 R703	1-216-487-11 1-216-487-11	METAL OXIDE	12K 12K	5% 5%	3W 3W	F F		TRA	NSISTOR				
R704 R705	1-247-700-11 1-202-836-00	CARBON SOLID	100 56K	5%	1/4W 1/2W		j Q721	8-729-326-11	TRANSISTOR 2	2SC2611			
R706	1-202-557-00	SOLID	220	5%	1/2W			RES	SISTOR				
R707 R708	1-202-823-51 1-202-847-00	SOL ID SOL ID	2.7K 560K	<i>3 t</i> b	1/2W 1/2W		R721	1-247-700-11 1-216-487-11		100 12K	5% 5%	1/4W 3W	F
R709 R710	1-202-842-51 1-202-844-00	SOLID	220K 330K		1/2W 1/2W		R723 R724 R725	1-216-487-11 1-247-700-11 1-202-836-00		12K 100 56K	5% 5%	3W 1/4W 1/2W	F
R711 R712	1-202-833-11 1-202-557-00	SOL ID SOL ID	18K 220	10%	1/2W 1/2W		   R726	1-202-557-00	SOLID	220	5%	1/2W	
	SPA	ARK GAP					R727   R728	1-202-823-51 1-202-847-00	SOL ID	2.7K 560K		1/2W 1/2W	
SG701	1-519-063-XX		GAP				R729   R730	1-202-842-51 1-202-844-00	SOL ID	220K 330K		1/2W 1/2W	
							   R731   R732	1-202-833-11 1-202-557-00	SOL ID	18K 220	10%	1/2W 1/2W	



Ref.No. Part No.	Description		Remark	Ref.No.	Part No.	Description			Remark
SG721 1-519-063-XX	ARK GAP  DISCHARGING GAP	****	*****	R748 R749 R750 R751 R752	1-202-847-00 1-202-842-51 1-202-844-00 1-202-833-11 1-202-557-00	SOLID SOLID	560K 220K 330K 18K 220 10%	1/2W 1/2W 1/2W 1/2W 1/2W	
*1-615-625-11	CB BOARD			 	SPA	RK GAP			
1-526-812-11 1-556-880-51 *4-026-251-00	SOCKET, CRT LEAD ASSY, HIGH-VOLTAGE SPACER, INSULATING			ĺ	1-519-063-XX	*****	******	*****	*****
CAI	PACITOR			i 	*A-1340-804-A	D BOARD, COM (Serial No.2	2,000,001 an	d later	)
C742 1-123-028-00 C743 1-102-050-00 C744 1-102-155-00	CERAMIC 0.01MF CERAMIC 330PF	20%	350V 500V 2KV		*A-1340-844-A		1PLETE 1,000,001 an	d later	)
C745 1-102-155-00 C746 1-102-155-00	CERAMIC 330PF	20% 20%	2KV 2KV		*2-261-207-00 *4-348-704-00	HEAT SINK, A HEAT SINK (A			
C747 1-102-267-00 C748 1-102-121-00	CERAMIC 0.0068MF CERAMIC 0.0022MF	10%	500V 50V	 	CAP	AC I TOR			
CB1 *1-564-443-11	NNECTOR  PLUG, CONNECTOR (2.5MM) 7 PLUG, CONNECTOR (2.5MM) 3 2P PLUG (M)	7 P 3 P		C6002   C6004   C6007	1-123-318-00 1-123-318-00 1-123-332-00 1-106-172-00 1-123-336-00	ELECT ELECT	33MF 33MF 47MF 0.001MF 470MF	20% 20% 20% 5% 20%	1 6V 1 6V 1 6V 5 0V 2 5V
CB4 *1-508-784-00 CB5 *1-508-784-00	1P PLUG			   C6009	1-123-380-00 1-108-587-00	ELECT	1MF 0.022MF	20% 5%	5 OV 5 OV
CB6 *1-508-784-00	1P PLUG			C6011		ELECT	470MF 0.0015MF	20% 5%	2 5 V 5 O V
DIC	DDE				1-123-333-00	ELECT	100MF	20%	1 6V
	DIODE 1SS119			C6015	1-123-356-00 1-123-321-00	ELECT ELECT	10MF 220MF	20% 20%	1 6 V
<u>COI</u>	<del></del>			C6018	1-123-333-00 1-123-356-00	ELECT	100MF 10MF	20% 20%	1 6V 1 6V
L741 1-407-701-00 L742 1-407-364-00 L743 1-407-364-00 L744 1-407-694-00	MICRO INDUCTOR 47UH COIL, SPOOK CHOKE 3.3UH COIL, SPOOK CHOKE 3.3UH MICRO INDUCTOR 12UH			   C6020	1-123-333-00	ELECT	100MF	20%	1 6V
	ON LAMP			C <b>6</b> 022	1-123-333-00 1-123-356-00 1-123-356-00	ELECT ELECT ELECT	100MF 10MF 10MF	20% 20% 20%	1 6V 1 6V 2 5V
NL741 1-519-013-13	<del></del>					ELECT	1MF	20%	SOV
	ANSISTOR				1-108-812-91 1-108-794-91	MYLAR MYLAR	0.047MF 0.0015MF	5% 5%	5 OV 5 OV
	TRANSISTOR 2SC2611	,	:	C6028	1-123-356-00 1-123-356-00 1-123-333-00	ELECT ELECT	10MF 10MF	20% 20%	25V 16V
RES	SISTOR		·		1-123-332-00	ELECT	100MF 47MF	20%	≥5V ≥5V
R741 1-247-700-11 R742 1-216-487-11 R743 1-216-487-11 R744 1-247-700-11 R745 1-202-836-00	CARBON 100 5% METAL OXIDE 12K 5% METAL OXIDE 12K 5% CARBON 100 5% SOLID 56K	1/4W 3W 3W 1/4W 1/2W	F F	C6033   C6034   C6035	1-123-332-00 1-108-614-91 1-123-333-00 1-123-332-00 1-108-614-91	ELECT MYLAR ELECT ELECT MYLAR	0.001MF 100MF 47MF 0.001MF	20% 10% 20% 20% 10%	100V 25V 25V 100V
R746 1-202-557-00 R747 1-202-823-51	SOLID 220 5% SOLID 2.7K	1/2W 1/2W		C6037 C6038 C6039	1-123-333-00 1-123-332-00 1-108-614-91	ELECT ELECT MYLAR	100MF 47MF 0.001MF	20% 20% 10%	25V 25V 200V



Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description				Remark
	1-123-333-00 1-123-332-00 1-108-614-91 1-102-947-00 1-102-824-21	ELECT ELECT MYLAR CERAMIC CERAMIC	100MF 47MF 0.001MF 10PF 470PF	20% 20% 10% 5% 5%	25V 25V 100V 50V 50V	D6003 D6004 D6005	8-719-931-05 8-719-911-19 8-719-911-19 8-719-911-19 8-719-911-19	DIODE EQBO1-0 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119	5			
C6045 C6046 C6047 C6048 C6050	1-102-824-21 1-102-824-21 1-102-824-21 1-102-824-21 1-123-356-00	CERAMIC CERAMIC CERAMIC CERAMIC ELECT	470PF 470PF 470PF 470PF 10MF	5% 5% 5% 5% 20%	50V 50V 50V 50V 25V	  -   IC6001	8-719-911-19 <u>IC</u> 8-759-600-02 8-759-178-12	DIODE 1SS119  IC M5218L IC UPC78L12				
C6051 C6052 C6054 C6058 C6069	1-123-318-00 1-102-973-00 1-123-332-00 1-123-356-00 1-123-356-00	ELECT CERAMIC ELECT ELECT ELECT	33MF 100PF 47MF 10MF 10MF	20% 5% 20% 20% 20%	16V 50V 16V 16V 25V	IC6003 IC6004 IC6005 IC6006	8-759-600-02 8-759-110-37 8-759-110-37 8-749-941-21	IC M5218L IC UPC1037H IC UPC1037H IC STK4121II				
C6201 C6202 C6210 C6211 C6212	1-123-356-00 1-123-356-00 1-123-356-00 1-123-356-00 1-123-332-00	ELECT ELECT ELECT ELECT ELECT	10MF 10MF 10MF 10MF 47MF	20% 20% 20% 20% 20%	25V 25V 16V 16V 16V	IC6008   IC6009		IC M5218L				
C6213	1-123-332-00	ELECT	47MF	20%	16V	L6301	1-408-163-00	<del>-</del>	R 5.6MM	<b>4</b> H		
C 6214 C 6215	1-123-332-00 1-123-332-00	ELECT ELECT	47MF 47MF	20% 20%	16V 16V		TRA	NSISTOR				
C6216 C6217 C6218	1-123-332-00 1-123-356-00 1-123-356-00	ELECT ELECT	47MF 10MF 10MF	20% 20% 20%	16V 16V 16V	06002	8-729-178-54 8-729-178-54 8-729-178-54		SC2785			
C6219 C6301	1-123-356-00 1-108-581-00	ELECT MYLAR	10MF 0.012MF	20% 5%	16V 50V	Q6004 Q6005	8-729-178-54 8-729-315-63	TRANSISTOR 25	SC 2785			
C6302 C6303	1-108-794-91 1-123-332-00	MYLAR ELECT	0.0015MF 47MF	5% 20%	50V 16V		8-729-398-63 8-729-178-54	TRANSISTOR 25		1		
C6304 C6305 C6306	1-123-332-00 1-123-369-00 1-123-323-00	ELECT ELECT ELECT	47MF 4.7MF 470MF	20 <b>%</b> 20 <b>%</b> 20 <b>%</b>	16V 50V 16V	06301 06302	8-729-178-54	TRANSISTOR 25 TRANSISTOR 25 TRANSISTOR 25	SC2785 SC2785			
	-	RO FUSE					8-72 <b>9-</b> 178-54 8-72 <b>9-</b> 115-30	TRANSISTOR 25		30		
CP6002 <u>A</u>	1-532-775-21 1-532-774-21	FUSE, MICRO	(SECONDARY)	630mA/	125V		RES	SISTOR				
CP6004 <u>/</u> f	\$\lambda 1-532-775-21\$ \$\lambda 1-532-774-21\$ \$\lambda 1-532-775-21\$	FUSE, MICRO	(SECONDARY)	630mA/	125V	R6002	1-215-457-00 1-215-457-00 1-215-457-00	METAL	33K 33K 33K	1% 1% 1%	1/6W 1/6W 1/6W	
CP6006 <u>∕</u> 1	<u>1-532-775-21</u>	FUSE, MICRO	(SECONDARY)	800mA/	125V	R6004	1-215-457-00 1-213-137-00	METAL	33K 330	1% 5%	1/6W 1W	<b>F</b>
0.1		INECTOR	TOD (0 5444)				1-213-137-00		330	5%	1W 1/6W	F
D1 D2 D3 D4 D5	*1-564-444-11 *1-564-440-11 *1-564-442-11 *1-564-441-11 *1-564-353-00	PLUG, CONNEC PLUG, CONNEC PLUG, CONNEC PLUG, CONNEC PLUG, CONNEC	TOR (2.5MM) TOR (2.5MM) TOR (2.5MM)	4P 6P 5P		R6008 R6009 R6010	1-215-425-00 1-215-428-00 1-215-433-00 1-215-441-00	METAL METAL METAL METAL	1.5K 2K 3.3K 6.8K	1% 1% 1%	1/6W 1/6W 1/6W	
D6	*1-564-441-11	PLUG, CONNEC	CTOR (2.5MM)	5P		R6012	1-215-445-00 1-215-435-00 1-215-425-00	METAL METAL METAL	10K 3.9K 1.5K		1/6W 1/6W 1/6W	
	DIO	DDE				R6014	1-215-428-00 1-215-433-00		2K 3.3K	1%	1/6W 1/6W	
D6001	8-719-931-05	DIODE EQBO1	-05			Ì						

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark
R6016 R6017 R6018 R6019 R6020	1-215-441-00 1-215-445-00 1-215-435-00 1-215-419-00 1-215-439-00	METAL METAL METAL METAL METAL	6.8K 10K 3.9K 820 5.6K	1%	1/6W 1/6W 1/6W 1/6W 1/6W			1-249-429-11 1-249-440-11 1-215-445-00 1-215-433-00 1-215-435-00	CARBON CARBON METAL METAL METAL	10K 82K 10K 3.3K 3.9K	5% 5% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6021 R6022 R6023 R6024 R6025	1-215-441-00 1-215-439-00 1-215-421-00 1-215-405-00 1-215-425-00	METAL METAL METAL METAL METAL	6.8K 5.6K 1K 220 1.5K		1/6W 1/6W 1/6W 1/6W 1/6W		R6092   R6093   R6094   R6095   R6096	1-215-441-00 1-215-435-00 1-215-425-00 1-215-441-00 1-215-439-00	METAL METAL METAL METAL METAL	6.8K 3.9K 1.5K 6.8K 5.6K	1% 1% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6026 R6027 R6028 R6029 R6030	1-215-425-00 1-249-417-11 1-215-421-00 1-215-439-00 1-215-441-00	METAL CARBON METAL METAL METAL	1.5K 1K 1K 5.6K 6.8K	1% 5% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W		R6098 R6099 R6100	1-215-439-00 1-215-439-00 1-215-445-00 1-215-445-00 1-215-399-00	METAL METAL METAL METAL METAL	5.6K 5.6K 10K 10K 120	1% 1% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R 60 31 R 60 32 R 60 33 R 60 34 R 60 35	1-215-439-00 1-215-421-00 1-215-419-00 1-249-429-11 1-249-429-11	METAL METAL METAL CARBON CARBON	5.6K 1K 820 10K 10K	1% 1% 1% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R6102   R6103   R6104   R6105   R6106	1-215-399-00 1-215-421-00 1-215-421-00 1-249-421-11 1-249-421-11	METAL METAL METAL CARBON CARBON	120 1K 1K 2.2K 2.2K	1% 1% 1% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6036 R6037 R6038 R6039 R6040	1-249-417-11 1-249-429-11 1-249-429-11 1-249-429-11 1-249-417-11	CARBON CARBON CARBON CARBON CARBON	1K 10K 10K 10K 1K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W			1-213-130-00 1-212-360-00 1-206-447-00 1-246-981-00 1-206-447-00	METAL OXIDE METAL OXIDE METAL OXIDE CARBON METAL OXIDE	82 1 2.2 4.7 2.2	5% 5% 5% 5% 5%	1W 1W 2W 1/8W 2W	F F F F
R6048 R6056 R6057 R6058 R6059	1-249-429-11 1-247-849-00 1-249-415-11 1-249-434-11 1-247-823-00	CARBON CARBON CARBON CARBON CARBON	10K 5.6K 680 27K 470	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W			1-213-130-00 1-246-981-00 1-212-360-00 1-249-421-11 1-249-421-11	METAL OXIDE CARBON METAL OXIDE CARBON CARBON	82 4.7 1 2.2K 2.2K	5% 5% 5% 5% 5%	1W 1/8W 1W 1/6W 1/6W	<b>F</b> F
R6060 R6063 R6064 R6065 R6068	1-247-887-00 1-249-434-11 1-247-823-00 1-247-887-00 1-249-429-11	CARBON CARBON CARBON CARBON CARBON	220K 27K 470 220K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R6120	1-215-421-00 1-215-421-00 1-215-399-00 1-215-399-00 1-215-399-00	METAL METAL METAL METAL METAL	1K 1K 120 120	1% 1% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6069 R6070 R6071 R6072 R6073	1-249-429-11 1-215-421-00 1-215-461-00 1-249-435-11 1-215-445-00	CARBON METAL METAL CARBON METAL	10K 1K 47K 33K 10K	5% 1% 1% 5% 1%	1/6W 1/6W 1/6W 1/6W 1/6W		R6122   R6123   R6124   R6125   R6126	1-215-399-00 1-215-421-00 1-215-373-31 1-215-373-31 1-215-373-31	METAL METAL METAL METAL METAL	120 1K 10 10	1% 1% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6074 R6075 R6076 R6077 R6078	1-249-440-11 1-215-435-00 1-215-439-00 1-249-417-11 1-249-429-11	CARBON ME TAL ME TAL CARBON CARBON	82K 3.9K 5.6K 1K 10K	5% 1% 1% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		R6130	1-215-373-31 1-215-429-00 1-249-405-11 1-249-405-11 1-247-819-00	ME TAL ME TAL CARBON CARBON CARBON	10 2.2K 100 100 330	1% 1% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R6079 R6080 R6081 R6082 R6083	1-249-429-11 1-215-421-00 1-215-461-00 1-249-405-11 1-249-405-11	CARBON METAL METAL CARBON CARBON	10K 1K 47K 100 100	5% 1% 1% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W			1-213-127-00 1-215-399-00 1-215-399-00 1-215-421-00 1-215-421-00	METAL OXIDE METAL METAL METAL METAL	47 120 120 1K 1K	5% 1% 1% 1% 1%	1W 1/6W 1/6W 1/6W 1/6W	F
R6084 R6085 R6086	1-249-429-11 1-249-429-11 1-249-429-11	CARBON CARBON CARBON	10K 10K 10K	5% 5% 5%	1/6W 1/6W 1/6W		   R6138   R6139   R6140	1-212-360-00 1-213-130-00 1-206-447-00	METAL OXIDE METAL OXIDE METAL OXIDE	1 82 2.2	5% 5% 5%	1W 1W 2W	F F



Ref No	Part No.	Description				Remark	IRef.No.	Part No.	Descriptio	on		Remark
Ker . No.	141 6 110.					<u></u>					1 /611	
R6141	1-249-421-11 1-249-421-11	CARBON CARBON	2.2K 2.2K		1/6W 1/6W			1-249-429-11 1-249-441-11		10K 5% 100K 5%	1/6W 1/6W	
R6142 R6143	1-246-981-00	CARBON	4.7	5%	1/8W	F		1-249-429-11	CARBON	10K 5%	1/6W	
R6144	1-246-981-00	CARBON	4.7	5%	1/8W			1-249-429-11	CARBON	10K 5%	1/6W	
R6145	1-206-447-00	METAL OXIDE	2.2	5%	2W	F	R6321	1-249-417-11	CARBON	1K 5%	1/6W	
R6146	1-213-130-00	METAL OX IDE	82	5%	1W	F	R6323	1-249-417-11	CARBON	1K 5%	1/6W	
R6147	1-212-360-00	METAL OX IDE	1	5%	1W	F	R6324	1-215-421-00	METAL	1K 1%	1/6W	
R6148 R6149	1-215-421-00	METAL METAL	1K 1K	1% 1%	1/6W 1/6W		} 	VAR	IABLE RESIS	STOR		
R6150	1-215-399-00	METAL	120	1%	1/6W		i .					
06161	1 215 200 00	METAL	120	1%	1/6W			1-230-814-11 1-230-814-11		CARBON 10KX4 CARBON 10KX4		
R6151 R6152	1-215-399-00 1-249-421-11	METAL CARBON	2.2K		1/6W		•	1-230-814-11				
R6153	1-249-421-11	CARBON		5%	1/6W			1-230-814-11		CARBON 10KX4		
R6154	1-215-445-00	METAL	10K	1%	1/6W		RV6005	1-228-859-00	RES, VAR,	CARBON TOK		
R6155	1-249-435-11	CARBON	33K	5%	1/6W		RV 6006	1-228-859-00	RES. VAR.	CARBON 10K		
R6156	1-249-405-11	CARBON	100	5%	1/6W		RV 6007	1-230-631-11	RES, ADJ,	CARBON 22K		
R6157	1-249-405-11	CARBON	100	5%	1/6W			1-230-630-11				
R6176 R6201	1-215-437-00 1-247-899-00	METAL CARBON	4.7K 680K	1% 5%	1/6W 1/6W			1-230-631-11		CARBON 22K CARBON 22K		
R6202	1-247-891-00	CARBON	330K	5%	1/6W			1 200 001 11	1120, 120,	Orini2011 ==11		
			3		1.4611			1-230-631-11		CARBON 22K		
R6203	1-249-417-11	CARBON	1K 1K	5% 5%	1/6W 1/6W			1-230-631-11		CARBON 22K		
R6204 R6205	1-249-417-11 1-249-405-11	CARBON CARBON	100	5%	1/6W			1-230-630-11		CARBON 10K		
R6206	1-249-417-11	CARBON	1K	5%	1/6W		RV6015	1-230-631-11	RES, ADJ,	CARBON 22K		
R6207	1-249-417-11	CARBON	1K	5%	1/6W		   RV6016	1-230-631-11	RES. ADJ.	CARBON 22K		
R6208	1-249-405-11	CARBON	100	5%	1/6W			1-230-631-11	RES, ADJ,	CARBON 22K		
R6210	1-249-429-11	CARBON	10K	5%	1/6W			1-230-631-11		CARBON 22K		
R6211 R6212	1-247-853-00 1-249-405-11	CARBON CARBON	8.2K 100	5% 5%	1/6W 1/6W			1-230-631-11		CARBON 22K		
R6213	1-249-405-11	CARBON	100	5%	1/6W		1	1-200 001 11	KLO, ADO,	OTTE STATE OF THE		
			104	- m	1.460		RV6021	1-230-631-11	RES, ADJ,	CARBON 22K		
R6214 R6215	1-249-429-11 1-247-853-00	CARBON CARBON	10K 8.2K	5% 5%	1/6W 1/6W			2 1-230-631-11 3 1-230-631-11		CARBON 22K		
R6216	1-215-421-00	METAL	1K	1%	1/6W			1-230-628-11				
R6217	1-215-439-00	METAL			1/6W		RV 6025	1-230-631-11	RES, ADJ,	CARBON 22K		
R6218	1-215-436-00	METAL	4.3K	1%	1/6W		   RV6026	1-230-631-11	RES ADJ	CARBON 22K		
R6219	1-215-415-00	METAL	560	1%	1/6W			1-230-631-11		CARBON 22K		
R6220	1-215-421-00	METAL	1K	1%	1/6W			3 1-230-631-11	RES, ADJ,	CARBON 22K	•	
R6221	1-215-441-00	METAL	6.8K 100K		1/6W 1/6W			0 1-230-631-11 0 1-230-631-11	RES, ADJ,	CARBON 22K CARBON 22K		
R6301 R6302	1-249-441-11 1-249-441-11	CARBON CARBON	100K	5%	1/6W		1 10030	1-250-051-11				
				·				1-230-631-11	RES, ADJ,	CARBON 22K		
R6303	1-249-429-11	CARBON	10K	5% 1%	1/6W			2 1-230-631-11 3 1-230-628-11		CARBON 22K CARBON 2.2K		
R6304 R6305	1-215-413-00 1-249-405-11	METAL CARBON	470 100	5%	1/6W 1/6W		•	1-230-633-41		CARBON 47K		
	1-247-893-00		390K		1/6W			1-230-633-41		CARBON 47K		
R6307	1-249-405-11	CARBON	100	5%	1/6W		DARUSA	. 1 220 621 11	DEC VUI	CARBON 22K		
R6308	1-215-411-00	METAL	390	1%	1/6W			5 1-230-631-11 3 1-230-631-11	RES, ADJ.	CARBON 22K		
R6309	1-215-403-00		180	1%	1/6W		RV 6039	1-230-631-11	RES, ADJ,	CARBON 22K		
R6310	1-215-403-00		180	1%	1/6W		•	1-230-631-11		CARBON 22K		
R6311 R6312	1-249-429-11 1-249-417-11	CARBON CARBON	10K 1K	5% 5%	1/6W 1/6W		KV6U41	1-230-631-11	KES, AUJ,	CARBON 22K		
KOSIZ	1-6-3-41/-11	OUNDOIL	111	J /6	1/08			2 1-230-631-11		CARBON 22K		
R6313	1-249-429-11	CARBON	10K	5%	1/6W			3 1-230-631-11		CARBON 22K		
R6314 R6315	1-249-417-11 1-249-429-11	CARBON CARBON	1K 10K	5% 5%	1/6W 1/6W			1 1-230-631-11 5 1-230-631-11		CARBON 22K CARBON 22K		
4,0213	1-6-3-463-11	CARDON	101/	J /0	1/ UM		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,	J. 11. D J. 1. EE IV		



Ref.No. Part No.	Description				Ref.No.	Part No.	Description			Remark
RV6046 1-230-631-11 RV6047 1-230-631-11 RV6048 1-230-631-11 RV6049 1-230-631-11 RV6050 1-230-631-11	RES, ADJ, CAF RES, ADJ, CAF RES, ADJ, CAF RES, ADJ, CAF RES, ADJ, CAF	RBON 22K RBON 22K RBON 22K RBON 22K RBON 22K			C5028   C5029   C5030	1-123-380-00 1-106-196-00 1-123-379-00 1-136-173-00 1-108-812-91	MYLAR ELECT FILM	1MF 0.01MF 0.47MF 0.47MF 0.047MF	20% 10% 20% 5% 5%	50V 100V 50V 50V 50V
RV6051 1-230-631-11	RES, ADJ, CAR	RBON 22K				1-123-929-00 1-108-579-00	ELECT MYLAR	1MF 0.01MF	5%	160V 50V
<u>SW I</u>	TCH				C5034	1-102-820-00 1-106-208-00	CERAMIC MYLAR	330PF 0.033MF	5% 10%	50V 100V
SW6002 1-553-716-00 SW6101 1-554-330-00		E RY				1-102-820-00	CERAMIC	330PF	5%	50V
******	*****				C5037   C5038	1-106-359-00 1-136-111-00		0.0047MF 1MF	10 <b>%</b> 5 <b>%</b>	200V 200V
*A-1345-624-A	E BOARD, COMP (Serial No.2,	,000,001 and			C5043	1-136-108-00 1-123-026-00 1-123-356-00		0.43MF 2.2MF 10MF	5% 20%	200V 160V 16V
*A-1345-635-A					C5053	1-102-121-00 1-123-379-00 1-102-973-00	ELECT CERAMIC	0.0022MF 0.47MF 100PF	10% 20% 5%	50V 50V 50V
<u>A</u> 1-453-099-11	DC BLOCK, HIG	GH-VOLTAGE				1-106-385-00 1-121-999-00	MYLAR ELECT	0.056MF 10MF	10%	200V 160V
*1-533-146-00 *4-323-833-00 *4-332-214-00 *4-363-404-00	E BOARD, COMF (Serial No.7, ************************************	IN OUT F, PC BOARD			C5058 <u>/</u>   C5059	1-102-244-00 1-136-477-11 1-162-115-00 1-106-359-00	CERAMIC FILM CERAMIC MYLAR	220PF 0.009MF 330PF 0.0047MF	10% 3% 10% 10%	500V 1.6KV 2KV 200V
4-375-412-01 *4-821-501-00	SPACER, MICA HEAT SINK					1-123-024-00	ELECT	33MF	20,2	160V
CAP	ACITOR				C5063	1-123-022-00 1-121-999-00	ELECT ELECT	22MF 10MF		350V 160V
C5001 1-108-614-91 C5002 1-162-117-00 C5003 1-102-212-00	MYLAR	0.001MF 100PF 820PF	10% 10% 10%	100V 500V 500V	C5065	1-108-684-91 1-123-356-00 1-102-244-00	MYLAR ELECT CERAMIC	0.0022MF 10MF 220PF	10% 20% 10%	200V 16V 500V
C5004 1-102-002-00 C5005 1-123-380-00	CERAMIC ELECT	680PF 1MF	10% 20%	500V 50V	C5069	1-108-431-00 1-106-220-00 1-123-333-00	MYLAR MYLAR	0.068MF 0.1MF 100MF	10% 10% 20%	200V 100V 25V
C5006 1-108-845-00. C5007 1-106-220-00 C5008 1-106-192-00	MYLAR MYLAR MYLAR	0.047MF 0.1MF 0.0068MF	10% 10% 10%	50V 100V 100V	C 5071	1-101-006-21 1-108-431-00	ELECT CERAMIC MYLAR	0.047MF 0.068MF	10%	50V 200V
C5009 1-136-311-11 C5011 1-108-630-91	FILM MYLAR	0.47MF 0.022MF	20% 10%	125V 100V	C5074	1-123-318-00 1-108-618-91 1-123-323-00	ELECT MYLAR ELECT	33MF 0.0022MF 470MF	20% 10% 20%	16V 100V 16V
C5012 1-123-356-00 C5013 1-130-868-00 C5014 1-123-369-00	ELECT FILM ELECT	10MF 0.0056MF 4.7MF	20% 5% 20%	16V 50V 50V	C5077		ELECT	470MF 330PF	20% 10%	25V 500V
C5015 1-123-381-00 C5016 1-123-356-00	ELECT ELECT	2.2MF 10MF	20% 20%	50V 16V	C5080	1-123-332-00 1-123-332-00 1-102-121-00	ELECT	47MF 47MF 0.0022MF	20% 20% 10%	25V 25V 50V
C5017 1-124-005-11 C5018 1-123-333-00 C5019 1-123-369-00		4.7MF 100MF 4.7MF	20% 20% 20%	50V 16V 25V	C5091	1-123-607-00 1-123-252-00	ELECT	0.1MF 1MF	20%	50V 160V
C5020 1-102-820-00 C5021 1-106-196-00	CERAMIC MYLAR	330PF 0.01MF	5% 10%	50V 100V	C5095	1-123-332-00 1-123-360-00 1-123-360-00		47MF 100MF 100MF	20% 20% 20%	16V 50V 50V
C5022 1-102-125-00 C5023 1-106-190-00 C5024 1-123-324-00	CERAMIC MYLAR ELECT	0.0047MF 0.0056MF 1000MF	10% 10% 20%	50V 100V 16V	C5097	1-123-360-00 1-123-363-00	ELECT ELECT	100MF 470MF	20% 20%	50V 50V
C5025 1-123-380-00 C5026 1-123-026-00	ELECT ELECT	1MF 2.2MF	20%	50V 160V	C5100	1-125-186-00 1-125-186-00 1-161-830-00	ELECT(BLOCK)			200V 200V 500V

# NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description	Remark
<b>⊠</b> C5119 <u>A</u>	_	CERAMIC			2KV	1	DIO	DE	
	1-102-157-00	CERAMIC	560PF	10%	500V	İ			
	1-108-849-00	MYLAR	0.1MF	10%	500		8-719-911-19		
	1-108-427-00	MYLAR	0.033MF	10%	200V 1 <b>6</b> 0V	D5002	8-719-101-57 8-719-911-19	DIODE RD5.6E-L1 DIODE 1SS119	
C5123	1-121-999-00	ELECT	10MF		1001		8-719-926-16	DIODE ERC26-15SA	
C5124	1-102-030-00	CERAMIC	330PF	10%	500V		8-719-911-19	DIODE 1SS119	
C5125	1-108-427-00	MYLAR	0.033MF	10%	200V	ĺ			
	.1-136-311-51	FILM	0.47MF	20%	1250		8-719-926-16	DIODE ERC26-15SA	
	.1-136-311-51 .1-161-743-51	FILM CERAMIC	0.47MF 0.0047MF		125V 400V		8-719-300-76 8-719-300-76	DIODE RH1A DIODE RH1A	
C3120 <u>/1</u> 2	.1-101-743-31	CERMITO	0.004781		7001		8-719-200-02	DIODE 10E2	
C5129 <u>∕</u> A	.1-161-743-51	CERAMIC	0.0047MF	1-01-4	400V		8-719-300-38	DIODE GU-3A	
	1-123-333-00	ELECT	100MF	20%	16V	1			
	1-123-356-00	ELECT	10MF	20%	16V	D5017		DIODE GU-3A	
	1-123-380-00	ELECT	1MF 100PF	20 <b>%</b> 5 <b>%</b>	50V 50V		8-719-511-20 8-719-503-06	DIODE S1VB20 DIODE S3WB60Z	
C5133	1-102-973-00	CERAMIC	10011	J /6	30 V	03019	4-375-412-01	SPACER, MICA; D5019	
C5134	1-123-330-00	ELECT	22MF	20%	25V	D5020	8-719-911-19	DIODE 1SS119	
C5135	1-102-973-00	CERAMIC	100PF	5%	50V	ĺ			
C 51 36	1-123-338-00	ELECT	2200MF	20%	25V	D5021	8-719-911-55	DIODE UOSG	
C5137	1-108-845-00	MYLAR	0.047MF	10%	50V	D5022	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	
C5138	1-123-338-00	ELECT	2200MF	20%	25V	D5023   D5026	8-719-100-35	DIODE RD5.6E-B2	
C5139	1-108-843-91	MYLAR	0.033MF	10%	50V		8-719-100-78	DIODE RD18E-B3	
	1-123-330-00	ELECT	22MF	20%	25V	İ			
	1-123-330-00	ELECT	22MF	20%	25V	D5028	8-719-911-19	DIODE 1SS119	
	1-102-973-00	CERAMIC	100PF	5%	50V 50V	D5029	8-719-102-72 8-719-200-02	DIODE RD5.6E-N3 DIODE 10E2	
C5143	1-123-380-00	ELECT	1MF	20%	3U <b>V</b>		8-719-200-02	DIODE 1SS119	
C5144	1-102-973-00	CERAMIC	100PF	5 <b>%</b>	50V		8-719-102-90	DIODE RD10E-N2	
C5145	1-108-843-91	MYLAR	0.033MF	10%	50V	1			
	1-123-330-00	ELECT	22MF	20%	25V		8-719-911-19	DIODE 1SS119	
C5147 C5148	1-108-845-00 1-108-587-00	MYLAR	0.047MF 0.022MF	10% 5%	50 <b>v</b> 50 <b>v</b>	D5034	8-719-911-19 8-719-100 <b>-</b> 57	DIODE 1SS119 DIODE RD10E-B2	
C3146	1-100-307-00	MILAK	0.022111	J /6	301		8-719-911-19	DIODE 1SS119	
C5150	1-106-359-00	MYLAR	0.0047MF	10%	200V		8-719-100-68	DIODE RD13E-B2	
C5151	1-123-321-00	ELECT	220MF	20%	16V	1			
C 51 52	1-123-356-00	ELECT	10MF	20%	16V	D5038	8-719-911-19	DIODE 1SS119	
C5153 C5154	1-123-356-00	ELECT ELECT	10MF 1000MF	20% 20%	16V 10V	D5039	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	
03134	1-123-311-00	EFECT	100000	20%	101	D5041		DIODE 1SS119	
C5155	1-123-323-00	ELECT	470MF	20%	16V		8-719-911-19	DIODE 1SS119	
C5156	1-102-125-00	CERAMIC	0.0047MF	10%	50V			nrong 100110	
C5157	1-102-125-00	CERAMIC	0.0047MF	10%	50V	D5043		DIODE 1SS119	
C5158 C5159	1-161-743-00 1-161-830-00	CERAMIC CERAMIC	0.0047MF 0.0047MF		400V 500V		8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	
63133	1-101-030-00	CENANTO	0.0047111				8-719-100-68	DIODE RD13E-B2	
C5160	1-123-335-00	ELECT	330MF	20%	25V	j D5047	8-719-100-68	DIODE RD13E-B2	
C5170	1-124-645-11	ELECT	10MF	20%	16V				
C5171	1-123-338-00	ELECT	2200MF	20%	25V 25V	D5048	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	
C5172 C5173	1-123-338-00 1-123-338-00	ELECT ELECT	2200MF 2200MF	20% 20%	25V 25V	:	8-719-911-19	DIODE 133119	
63173	1-123-330-00	LCLOT	LLOOM	20%	231		8-719-900-93	DIODE VO9C	
C5174	1-123-338-00		2200MF	20%	25V	D5054	8-719-100-68	DIODE RD13E-B2	
C5175	1-123-318-00		33MF	20%	16V		0 710 100 60	DIADE 00125 02	
C5176 C5199	1-123-321-00 1-102-125-00	ELECT CERAMIC	220MF 0.0047MF	20% 10%	16V 50V	D5055	8-719-100-68 8-719-200-02	DIODE RD13E-B2 DIODE 10E2	
C5200	1-102-125-00	CERAMIC	330PF	5%	50V 50V		8-719-100-87	DIODE RD22E-B3	
00	1 101 010-00	0_1011120					8-719-100-87	DIODE RD22E-B3	
C5300	1-123-380-00	ELECT	1MF	20%	50V				
		,				i			

 The components identified by in this parts list have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value

originally used.

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No. Part No.	Description	Remark	Ref.No.	Part No.	Description			Remark
COM	Description NECTOR 3P PLUG (M)		L5014	1-459-104-00	COIL, DUST C	ORE		
E5001 *1-508-765-00	3P PLUG (M)			NEO	N LAMP			
E5002 *1-508-786-00 E5003 *1-564-440-11 E5004 *1-560-127-00 E5005 *1-564-353-00	PLUG, CONNECTOR (2.5MM) 4P PLUG. CONNECTOR (2.5MM) 7P		NL 5001	1-519-108-XX	LAMP, NEON AS	SSY		
E5005 *1-564-355+00	DUILO CONNECTOR (2.5mm) 100		05001	0 720 170 54	TDANSISTOR 2	CC 270E		
E5006 *1-508-766-00 E5011 *1-508-765-00 E5012 *1-508-786-00 E5013 *1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P PLUG, CONNECTOR (2.5MM) 10P 4P PLUG (M) 3P PLUG (M) 2P PLUG (M) PLUG, CONNECTOR (2.5MM) 2P		Q5001   Q5002   Q5003   Q5004   Q5006	8-729-178-54 8-729-178-54 8-729-178-54 8-729-178-54	TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2:	SC 2785 SC 2785 SC 2785 SC 2785 SC 2785		
E5014 *1-564-441-11 E5015 *1-564-440-11 E5016 *1-506-347-21 E5017 *1-564-440-11 E5018 *1-564-441-11	PLUG, CONNECTOR (2.5MM) 4P 4P PLUG PLUG, CONNECTOR (2.5MM) 4P PLUG, CONNECTOR (2.5MM) 5P		Q5007   Q5009   Q5010   Q5011   Q5012	8-729-178-54 8-729-178-54 8-729-238-32 8-729-105-62 8-729-101-62	TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2:	SC 2785 SC 2785 SC 2383 SD 560 SB 601		
E5019 *1-564-443-11 E5021 *1-564-443-11 E5022 *1-564-444-11 E5023 *1-564-443-11 E5026 *1-564-442-11	PLUG, CONNECTOR (2.5MM) 7P PLUG, CONNECTOR (2.5MM) 8P PLUG, CONNECTOR (2.5MM) 7P PLUG, CONNECTOR (2.5MM) 6P		Q5013   Q5014   Q5017   Q5020   Q5021	8-729-168-82 8-729-800-80 8-729-178-54 8-729-178-54 8-729-117-54	TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2	SC2688 SD1399-CA SC2785 SC2785 SA1175		
E5027 *1-508-765-00 E5028 *1-506-347-21 E5029 *1-508-786-00 E5030 *1-506-347-21 E5031 *1-508-786-00	3P PLUG (M) 4P PLUG 2P PLUG (M) 4P PLUG		Q5022   Q5023   Q5024   Q5025   Q5026	8-729-178-54 8-729-117-54 8-729-201-78 8-729-117-54 8-729-178-54	TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2: TRANSISTOR 2:	SC2785 SA1175 SD1406 SA1175 SC2785		
E5032 *1-506-348-XX E5033 *1-508-784-00	3P PLUG (L)		Q5030 Q5031	8-729-117-54 8-729-178-54 8-729-117-54	TRANSISTOR 2:	SA1175 SC2785		
FUS	<u>SE</u>		i '			SAIIIS		
F5001 <u>A</u> . 1-532-656-11 F5002 <u>A</u> . 1-532-562-11 F5003 <u>A</u> . 1-532-562-11	FUSE, GLASS TUBE 6.3A/125V FUSE, GLASS TUBE 2.5A/125V FUSE, GLASS TUBE 2.5A/125V		   R5001   R5002   R5003	1-249-417-11 1-249-417-11 1-244-889-51	CARBON CARBON CARBON	1K 5% 1K 5% 4.7K 5%	1/6W 1/6W 1/2W	
<u>IC</u>			R5004	1-249-429-11 1-215-901-00	CARBON	10K 5% 33K 5%	1/6W	F
IC5001 8-759-100-60 IC5003 8-759-600-02 IC5005 8-759-700-06 IC5006 8-759-179-12 IC5007 8-759-178-12	IC M5218L IC NJM7812B IC UPC7912H		R5006   R5007   R5008   R5010	1-247-843-00 1-247-815-00 1-247-819-00 1-247-894-00 1-249-433-11	CARBON CARBON CARBON CARBON	3.3K 5% 220 5% 330 5% 430K 5% 22K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
IC5008 8-759-111-88 IC5009 8-759-111-88	IC UPC1188H IC UPC1188H		R5013	1-247-859-00	CARBON	15K 5%	1/6W	
<u>co</u> 1	<u> </u>		R5014   R5015	1-249-417-11 1-247-868-00 1-249-440-11	CARBON	1K 5% 36K 5% 82K 5%	1/6W 1/6W 1/6W	
L5003 1-407-705-00 L5004 1-459-570-11	MICRO INDUCTOR 100UH HLC			1-249-440-11	CARBON	82K 5%	1/6W	
L5005 1-459-614-11 L5007 1-407-696-00 L5008 1-407-690-00	COIL, CHOKE 90UH MICRO INDUCTOR 18UH MICRO INDUCTOR 5.6UH	•	R5019 R5020	1-247-843-00 1-215-447-00 1-247-150-00 1-215-437-00	METAL CARBON	3.3K 5% 12K 1% 6.2K 5% 4.7K 1%	1/6W 1/6W 1/4W	
L5009 1-407-720-00 L5010 1-459-526-11 L5011 1-459-104-00	CHOKE COIL COIL, CHOKE COIL, DUST CORE		R5022	1-215-471-00 1-215-473-00	METAL	120K 1% 150K 1%	1/6W 1/6W 1/6W	

# NOTE:

The components identified by shading and mark ∆ are critical for safety. Replace only with part number specified.



Ref.No. Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark
R5025 1-249-435-11 R5027 1-215-893-11 R5029 1-249-421-11 R5030 1-247-845-00 R5031 1-247-833-00	CARBON METAL OXIDE CARBON CARBON CARBON	33K 1.5K 2.2K 3.9K 1.2K	5% 5% 5% 5%	1/6W 2W 1/6W 1/6W 1/6W	F	R5128   R5129   R5160   R5173   R5174	1-249-417-11 1-247-694-11 1-214-595-00 1-215-415-00 1-247-700-11	CARBON CARBON METAL OXIDE METAL CARBON	1K 33 100K 560 100	5% 5% 5% 1% 5%	1/6W 1/4W 1W 1/6W 1/4W	F
R5033 1-247-873-00 R5034 1-247-857-00 R5035 1-215-463-00 R5036 1-249-429-11 R5038 1-215-458-00	CARBON CARBON ME TAL CARBON ME TAL	56K 12K 56K 10K 36K	5% 5% 1% 5% 1%	1/6W 1/6W 1/6W 1/6W 1/6W		R5175   R5176   R5177   R5178   R5179	1-215-924-00 1-216-453-00 1-215-445-00 1-249-405-11 1-215-417-00	METAL OXIDE METAL OXIDE METAL CARBON METAL	15K 270 10K 100 680	5% 5% 1% 5% 1%	3W 2W 1/6W 1/6W 1/6W	F F
R5039 1-249-417-11 R5046 1-247-853-00 R5058 1-215-453-00 R5059 1-215-449-00 R5060 1-215-453-00	CARBON CARBON ME TAL ME TAL ME TAL	1K 8.2K 22K 15K 22K	5% 5% 1% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W		R5180   R5181   R5182   R5183   R5184	1-247-783-00 1-249-405-11 1-249-429-11 1-215-441-00 1-215-415-00	CARBON CARBON CARBON METAL METAL	10 100 10K 6.8K 560	5% 5% 5% 1% 1%	1/6W 1/6W 1/6W 1/6W 1/6W	
R5061 1-247-713-11 R5062 1-247-887-00 R5063 1-249-419-11 R5065 1-249-417-11 R5066 1-206-521-00	CARBON CARBON CARBON CARBON METAL OXIDE	1K 220K 1.5K 1K 27	5% 5% 5% 5% 5%	1/4W 1/6W 1/6W 1/6W 3W	F.	R5191 <u>A</u>   R5192 <u>A</u>   R5193	1-216-371-00 1-202-729-51 1-202-723-51 1-247-873-00 1-249-435-11	METAL OXIDE SOLID SOLID CARBON CARBON	1.5 6.8M 2.2M 56K 33K	5% 10% 10% 5% 5%	2W 1/2W 1/2W 1/6W 1/6W	F
R5067 l-249-417-11 R5069 l-247-711-11 R5070 l-247-883-00 R5071 l-247-715-11 R5073 l-247-851-00	CARBON CARBON CARBON CARBON CARBON	1K 680 150K 1.5K 6.8K	5% 5% 5% 5% 5%	1/6W 1/4W 1/6W 1/4W 1/6W	F	R5195   R5196   R5197   R5198   R5199	1-247-821-00 1-247-859-00 1-249-432-11 1-249-441-11 1-246-981-00	CARBON CARBON CARBON CARBON CARBON	390 15K 18K 100K 4.7	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/8W	F
R5074 1-215-403-00 R5086 1-249-441-11 R5087 1-214-595-00 R5088A.1-205-798-11 R5089 1-215-415-00	METAL CARBON METAL OXIDE CEMENTED METAL	180 100K 100K 1.5 560	1% 5% 5% 5% 1%	1/6W 1/6W 1W 20W 1/6W	F	R5200   R5201   R5202   R5203   R5204	1-247-873-00 1-249-435-11 1-247-821-00 1-247-859-00 1-249-432-11	CARBON CARBON CARBON CARBON CARBON	56K 33K 390 15K 18K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R5090 1-247-843-00 R5091 1-247-667-00 R5092 1-205-778-11 R5093 1-206-439-00 R5096 1-215-866-11	CARBON CARBON CEMENTED METAL OXIDE METAL OXIDE	3.3K 5.6K 4.7 1 330	5% 5% 10% 5% 5%	1/6W 1/4W 7W 2W 1W	F F		1-249-441-11 1-246-981-00 1-206-692-00 1-215-451-00 1-249-417-11	CARBON CARBON METAL OXIDE METAL CARBON	100K 4.7 15K 18K 1K	5% 5% 5% 1% 5%	1/6W 1/8W 2W 1/6W 1/6W	F F
R5098 1-213-131-00 R5100 1-215-435-00 R5111 1-206-459-00 R5112 1-249-441-11 R5113 1-249-429-11	METAL OXIDE METAL METAL OXIDE CARBON CARBON	100 3.9K 6.8 100K 10K	5% 1% 5% 5% 5%	1W 1/6W 2W 1/6W 1/6W	F F	R5215	1-249-417-11 1-215-876-00 1-216-371-00 1-214-773-00	CARBON METAL OXIDE METAL OXIDE METAL METAL	1K 15K 1.5 68K	5% 5% 5% 1%	1/6W 1W 2W 1/4W	F F Supposes Full Constant
R5114 1-247-857-00 R5115 1-249-421-11 R5116 1-249-417-11 R5117 1-249-421-11 R5119 1-247-131-00	CARBON CARBON CARBON CARBON CARBON	12K 2.2K 1K 2.2K 1K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/4W	F	R5220	1-249-437-11 1-249-437-11 1-247-831-00 1-249-417-11	METAL CARBON CARBON CARBON CARBON	47K 47K 1K 1K	5% 5% 5% 5%	1/4W 1/6W 1/6W 1/8W 1/6W	r admin
R5120 1-214-751-00 R5121 1-249-453-11 R6122 1-249-429-11 R5123 1-249-441-11 R5124 1-249-425-11	ME TAL CARBON CARBON CARBON CARBON	8.2K 3.3 10K 100K 4.7K	1% 5% 5% 5% 5%	1/4W 1/4W 1/6W 1/6W 1/6W	F	R5223   R5224   R5225   R5226   R5228	1-249-429-11 1-249-429-11 1-249-429-11 1-249-437-11 1-247-163-00	CARBON CARBON CARBON CARBON CARBON	10K 10K 10K 47K 22K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/4W	
R5125 1-249-441-11 R5126 1-249-441-11 R5127 1-249-437-11	CARBON CARBON CARBON	100K 100K 47K	5% 5% 5%	1/6W 1/6W 1/6W		   R5229   R5230   R5231	1-249-433-11 1-249-425-11 1-249-433-11	CARBON CARBON CARBON	22K 4.7K 22K	5% 5% 5%	1/6W 1/6W 1/6W	

 The components identified by in this parts list have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used. NOTE:

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified.



Ref.No. Part No	<u>.</u>	Description				Remark	Ref.No.	Part No.	Description			Remark
R5232 1-247-89 R5233 1-249-43	21-11	CARBON	12K 2.2K	5%	1/6W 1/6W		C1303	1-102-978-00 1-101-004-00	CERAMIC	220PF 0.01MF	5%	50V 50V
R5236 1-249-49 R5237 1-247-89			100 330K	5% 5%	1/6W 1/6W			1-123-318-00 1-106-196-00		33MF 0.01MF	20 <b>%</b> 10 <b>%</b>	16V 100V
R5238 1-249-40	05-11	CARBON	100	5%	1/6W		C1306	1-123-333-00	ELECT	100MF	20%	1 6V
R5239 1-249-43 R5240 1-249-43		CARBON CARBON	47K 22K	5% 5%	1/6W 1/6W			1-102-822-00 1-101-888-00		390PF 68PF	5% 5%	50V 50V
R5241 1-249-4	05-11	CARBON	100	5%	1/6W		01300			0011	3,6	301
R5246 1-215-4 R5247 1-215-4		METAL METAL	1K 10K	1% 1%	1/6W 1/6W			<u>D10</u>	DE .			
R5248 1-215-4	77-00	ME TAL	220K	1%	1/6W			8-719-911-19 8-719-911-19				
R5249 1-215-4		METAL	15K	1%	1/6W		D1307	8-719-911-19	DIODE 1SS119			
R5250 1-215-44 R5251 1-249-4		ME TAL CARBON	15K 1K	1% 5%	1/6W 1/6W			8-719-911-19 8-719-911-19				
R5252 1-249-4			100	5%	1/6W		İ					
R5260 1-247-7	15-11	CARBON	1.5K	5%	1/4W	F		8-719-911-19 8-719-911-19				
R5261 1-215-4	21-00	ME TAL	1K	1%	1/6W		D1316	8-719-911-19	DIODE 1SS119			
R5262 1-249-40 R5263 1-207-40		CARBON WIREWOUND	100 1	5% 10%	1/6W 1/2W			8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119			
R5264 1-207-4		WIREWOUND	i	10%	1/2W		1 01320	0-713-311-13	D100L 133113			
R5270 1-247-8	51_00	CARBON	6.8K	59	1/6W			8-719-911-19 8-719-102-58		N2		
R5271 1-247-8	43-00	CARBON	3.3K	5%	1/6W		01322	0-713-102-30	D1002 RD3.02	-112		
R5280 1-247-89			470K		1/6W			IC				
R5297 1-205-77 R5299 1-249-47			4.7 1K	10% 5%	7W 1/6W		IC1301	8-759-909-49	IC CX23040			
	VAR	IABLE RESISTO	<u>R</u>					<u>COI</u>	<u>L</u>			
RV5001 1-228-72	23-00	RES, ADJ, CER	RAMIC C	ARBON	4.7K		L1301	1-408-454-31	MICRO INDUCT	OR 100UH		
RV5001 1-228-77 RV5008 1-228-77 RV5009 1-228-77 RV5010 1-228-77	23-00 23-00 21-00	RES, ADJ, CER RES, ADJ, CER RES, ADJ, CER	RAMIC C RAMIC C RAMIC C	ARBON ARBON ARBON	4.7K 4.7K 2.2K			CON	NECTOR			
		RK GAP					M1   M2	*1-564-441-11 *1-564-354-00	PLUG, CONNEC PLUG, CONNEC	TOR (2.5MM) TOR (2.5MM)	3P	
SG5001 1-519-0	63-XX	DISCHARGING	GAP				M3 M4	*1-564-441-11 *1-564-354-00				
		NSFORMER	<b></b>				M5	*1-564-354-00				
TEOO1 1 427 0			U00 F 7 0	NTAL D	27115			TRA	NSISTOR			
T5001 1-437-07 T5002A.1-448-10 T5003 1-421-69 T5004A.1-439-30	62 <b>-</b> 11	TRANSFORMER,	POWER	NIAL D	KIVE		   Q1301	8-729-178-54	TRANSISTOR 2	SC 2785		
T5003 1-421-69	56-11	TRANSFORMER,	FERRIT	E (DFT	)		01302	8-729-178-54	TRANSISTOR 2	SC2785		
T5004A.1-439-30 T5005A.1-421-59		TRANSFORMER /					Q1303	8-729-178-54	TRANSISTOR 2	502785		
T5006 <u>↑</u> 1-421-59		•						RES	ISTOR			
*****							R1301	1-249-421-11	CARBON	2.2K 5%	1/6W	
^^^^^		******		*****	*****		R1302   R1303	1-249-421-11	CARBON	2.2K 5% 2.2K 5%	1/6W 1/6W	
*A-1371-0	058-A	M BOARD, COMP		1 and	latori			1-249-421-11 1-249-421-11		2.2K 5%	1/6W	
		(Serial No.2					İ		CARBON	2.2K 5%	1/6W	
*A-1371-	176-A	M BOARD, COMP (Serial No.7.		1 and	lateri			1-249-421-11 1-249-421-11	CARBON CARBON	2.2K 5% 2.2K 5%	1/6W 1/6W	
		******						1-249-421-11	CARBON	2.2K 5%	1/6W	
	C V D	ACITOR						1-249-421-11	CARBON	2.2K 5%	1/6W	
01001 1100 2		ACITOR	00055		F 24	5011	ĺ	1-249-421-11	CARBON	2.2K 5%	1/6W	
C1301 1-102-9	/8-00	CERAMIC	220PF		5%	50 <b>v</b>	R1311	1-249-421-11	CARBON	2.2K 5%	1/6W	

# NOTE:

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with The components identified by shading and mark A are critical for safety. Replace only with part number specified.

# M T1 T2 XR XG XB WA

Ref.No. Part No.	Description			Remark	Ref.No.	Part No.	Description	<u>1</u> .		Remark
R1312 1-249-437-11 R1313 1-249-441-11 R1314 1-249-421-11 R1315 1-247-887-00 R1316 1-249-425-11	CARBON 47K CARBON 100K CARBON 2.2K CARBON 220K CARBON 4.7K	5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		D1304	8-719-904-92 8-719-904-92	DIODE GL-9	HY2	******	*****
R1317 1-247-833-00 R1318 1-247-823-00 R1319 1-249-405-11 R1320 1-249-429-11 R1321 1-247-823-00	CARBON 1.2K CARBON 470 CARBON 100 CARBON 10K CARBON 470	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		         S13202	*1-615-622-12 <u>SWI</u> <b>1</b> .1-554-088-11	******* TCH	/ BOARD		
R1322 1-249-421-11 R1323 1-249-421-11 R1324 1-249-421-11 R1325 1-249-429-11 R1326 1-249-433-11	CARBON 2.2K CARBON 2.2K CARBON 2.2K CARBON 10K CARBON 22K	5%	1/6W 1/6W 1/6W 1/6W 1/6W		  ******     	************ *1-618-355-11		*****	*****	*****
R1327 1-247-819-00 R1328 1-247-791-00 R1329 1-247-859-00 R1336 1-249-417-11	CARBON         330           CARBON         22           CARBON         15K           CARBON         1K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W		   XR1    ******	<u>CON</u> *1-560-278-00	•		******	*****
<u>SW</u> :	<u>ITCH</u>				1	*1-618-356-11	XG BOARD			
\$1301 1-554-088-00 \$1302 1-554-088-00 \$1303 1-554-088-00 \$1304 1-554-088-00 \$1305 1-554-980-11	SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD				XG1	<u>CON</u> *1-560-721-21	NECTOR PLUG, CONNE	ECTOR 2P		
\$1306	SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD SWITCH, KEY BOARD				*******       	**************************************		******	*****	*****
S1311 1-554-088-00	SWITCH, KEY BOARD				i I XB1	*1-560-278-00		ECTOR 5P		
S1312 1-554-980-11 S1313 1-554-980-11	SWITCH, KEY BOARD SWITCH, KEY BOARD				  ******	******	******	******	*****	****
\$1316  1-554-980-11 \$1317  1-554-980-11	SWITCH, KEY BOARD SWITCH, KEY BOARD					*1-618-588-11	WA BOARD			
\$1319 1-554-980-11 \$1321 1-553-651-00 \$1322 1-553-651-00 \$1323 1-553-651-00	SWITCH, KEY BOARD SWITCH, SLIDE SWITCH, SLIDE					1-543-060-00	•			
	SWITCH, SLIDE				     COE 01		ACITOR	10005		F0.W
	<u> </u>				C8502	1-102-973-00 1-102-973-00 1-102-973-00		100PF 100PF 100PF	5% 5% 5%	50 V 50 V 50 V
******	*********	, ,****	****	*****	C8504	1-102-973-00 1-102-973-00 1-102-973-00	CERAMIC	100PF 100PF	5% 5%	50 V 50 V
*1-615-621-12	T1 BOARD				ĺ	1-102-973-00		100PF	5%	50 V
*4-375-416-01	HOLDER, LED				 	JAC	<u>K</u>			
DIC					J8503 	1-507-792-00				
	DIODE SLP155B				[ 	<u>C01</u>	<u>L</u>			
D1302 8-719-921-55	DIODE SLP155B				L8501	1-410-328-11	MICRO INDUC	TOR 10UH		



Ref.No. Part No.	Description			Remark	Ref.No.	Part No.	Description				Remark
L8502 1-410-328-11 L8503 1-410-328-11 L8504 1-410-328-11 L8505 1-410-328-11 L8506 1-410-328-11	MICRO INDUC MICRO INDUC MICRO INDUC MICRO INDUC MICRO INDUC	FOR 10UH FOR 10UH FOR 10UH			C8539   C8540	1-101-006-00 1-101-006-00 1-101-006-00 1-101-888-00	CERAMIC CERAMIC	0.047M 0.047M 0.047M 68PF	F F	5%	50V 50V 50V 50V
L8510 1-408-409-00					İ	DIC	DDE				
	TCH	. 5.1. 255.1.				8-719-102-73 8-719-102-73					
SW8501 1-554-918-11	<del></del>	)F				8-719-102-73 8-719-911-19	DIODE RD6.28	E-N1			
	NECTOR					8-719-911-19	DIODE 155119				
WA1 *1-562-370-00		ROARD TO BOAR	2D 18P		D8506	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119				
******	•			*****	D8508	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	)			
*A-1389-761-A					1 50505	8-719-102-73	DIODE RD6.28				
N-1303-701-A	******				D8511	8-719-102-73	DIODE RD6.28				
*4-334-250-00 *4-334-251-00 *4-334-252-00	LID, UPPER.	SHIELD CASE			D8513	8-719-103-06 8-719-103-06 8-719-103-06 8-719-103-06	DIODE RD13E-	-N2 -N2			
CAP	AC ITOR				 	<u>IC</u>					
C8507 1-124-645-11 C8508 1-124-645-11 C8509 1-124-645-11 C8510 1-101-006-00	ELECT	10MF 10MF 10MF 0.047MF	20% 20% 20%	16V 16V 16V 50V	IC8502	8-759-900-86 8-759-900-09 8-759-901-38		ĺ			
C8511 1-101-006-00	CERAMIC	0.047MF		50 <b>v</b>	   	<u>COI</u>	<u>L</u>				
C8512 1-101-006-00 C8513 1-123-318-00 C8514 1-123-356-00 C8515 1-102-824-21	CERAMIC ELECT ELECT CERAMIC	0.047MF 33MF 10MF 470PF	20% 20% 5%	50V 16V 16V 50V	L8508	1-410-328-11 1-410-328-11 1-410-328-11	MICRO INDUCT	OR 10UH			
C8516 1-101-006-00	CERAMIC	0.047MF		50V	<b> </b> 	TRA	NSISTOR				
C8517 1-101-006-00 C8518 1-123-318-00 C8519 1-101-006-00 C8520 1-101-006-00 C8521 1-101-006-00	CERAMIC ELECT CERAMIC CERAMIC CERAMIC	0.047MF 33MF 0.047MF 0.047MF 0.047MF	20%	50V 16V 50V 50V 50V	Q8502   Q8503   Q8504	8-729-178-54 8-729-178-54 8-729-178-54 8-729-178-54 8-729-178-54	TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2	SC 2785 SC 2785 SC 2785			
C8522 1-123-318-00 C8523 1-101-888-00 C8524 1-101-888-00 C8525 1-101-888-00 C8526 1-101-888-00	ELECT CERAMIC CERAMIC CERAMIC CERAMIC	33MF 68PF 68PF 68PF 68PF	20% 5% 5% 5% 5%	16V 50V 50V 50V	Q8509	8-729-178-54 8-729-900-36 8-729-900-36 8-729-900-36 8-729-900-36	TRANSISTOR D TRANSISTOR D TRANSISTOR D TRANSISTOR D TRANSISTOR D	TC124ES TC124ES TC124ES			
C8527 1-123-318-00 C8528 1-101-888-00 C8529 1-101-888-00 C8530 1-101-888-00 C8532 1-101-006-00	ELECT CERAMIC CERAMIC CERAMIC CERAMIC	33MF 68PF 68PF 68PF 0.047MF	20% 5% 5% 5%	16V 50V 50V 50V 50V	Q8512 Q8513 Q8514	8-729-900-36 8-729-178-54 8-729-178-54 8-729-178-54 8-729-900-36	TRANSISTOR D TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR D	SC2785 SC2785 SC2785			
	CERAMIC CERAMIC ELECT ELECT	0.047MF 0.047MF 33MF 33MF	20% 20%	50V 50V 16V 16V		8-729-178-54 8-729-117-54 RES	TRANSISTOR 2 TRANSISTOR 2				
C8537 1-102-820-00	CERAMIC	330PF	5%	50V	R8501	1-247-700-11		100	5%	1/4W	

# WB G(SW,REG)

Ref.No. Part No.	Description				Remark	Ref.No. Part No.	Description			Rema	irk
R8502 1-247-700-11 R8503 1-247-104-00 R8504 1-247-104-00 R8505 1-247-104-00	CARBON CARBON CARBON CARBON	100 75 75 75	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		A.1-413-219-11  *2-430-308-01	G BOARD ******  INSULATOR (TK	-03). TR			
R8506 1-247-104-00	CARBON	75	5%	1/4W		*2-430-498-01 *2-430-499-01	RUBBER, HEAT SHEET, INSULA	SINK TING			
R8507 1-249-429-11 R8508 1-249-429-11 R8509 1-249-429-11	CARBON CARBON CARBON	10K 10K 10K	5% 5% 5%	1/6W 1/6W 1/6W		*2-430-742-00 *2-430-743-00	BRACKET, RIGH BRACKET, LEFT				
R8510 1-249-419-11 R8511 1-249-419-11	CARBON CARBON	1.5K 1.5K	5% 5%	1/6W 1/6W		2-430-773-01 2-430-060-01	+PSW 3X6 +PSW 3X18				
R8512 1-249-419-11 R8513 1-249-429-11	CARBON CARBON	1.5K 10K	5% 5%	1/6W 1/6W		j —	ACITOR EILM	0.1MF	100	4004	
R8514 1-249-405-11 R8515 1-249-405-11 R8516 1-249-405-11	CARBON CARBON CARBON	100 100 100	5% 5% 5%	1/6W 1/6W 1/6W		C601 A.1-130-806-21   C602 A.1-125-268-11   C603 A.1-124-024-51	ELECT ELECT	47MF 4.7MF	20%	400V 400V 350V	5. 4
R8517 1-247-853-00 R8518 1-249-421-11	CARBON CARBON	8.2K 2.2K	5% 5%	1/6W 1/6W		C604 <u>A</u> .1-124-024-51   C605 <u>A</u> .1-161-963-11	CERAMIC	4.7MF 100PF		350V 2KV	
R8519 1-247-817-00 R8520 1-247-817-00 R8521 1-247-817-00	CARBON CARBON CARBON	270 270 270	5% 5% 5%	1/6W 1/6W 1/6W		C606 A.1-123-575-51   C607 A.1-123-935-51   C608 A.1-161-912-11		100MF 33MF 560PF		160V 160V 500V	T.
R8522 1-249-419-11	CARBON	1.5K 1.5K	5% 5%	1/6W 1/6W		C609 A. 1-161-912-11 C610 A. 1-123-349-51		560 PF 1000MF	10% 20%	500V 35V	01 01
R8524 1-249-419-11 R8525 1-249-433-11	CARBON CARBON CARBON	1.5K 22K	5% 5%	1/6W 1/6W		C611 A.1-123-333-51   C612 A.1-161-912-11   C613 A.1-161-912-11	ELECT CERAMIC CERAMIC	100MF 560PF 560PF		25V 500V 500V	
R8526 1-249-433-11 R8527 1-249-419-11	CARBON	22K 1.5K	5% 5%	1/6W 1/6W		C614 A. 1-161-912-11   C614 A. 1-123-349-51   C615 A. 1-123-333-51	ELECT	1000MF 100MF	20% 20%	35V 25V	
R8528 1-247-823-00 R8529 1-249-417-11 R8530 1-247-819-00	CARBON CARBON CARBON	470 1K 330	5% 5% 5%	1/6W 1/6W 1/6W		C616 A.1-130-806-21 C617 A.1-130-806-21		0.1MF / / / / / / / / / / / / / / / / / / /	10% 10%	400V 400V	
R8531 1-249-433-11 R8532 1-249-429-11	CARBON	22K 10K	5% 5%	1/6W		C618 A.1-131-455-51   C619 A.1-131-455-51   C620 A.1-123-332-51	TANTALUM ELEC TANTALUM ELEC ELECT		20% 20% 20%	16V 16V 25V	
R8533 1-249-405-11 R8534 1-247-815-00	CARBON CARBON	100 220	5% 5%	1/6W 1/6W		   C621 ♠.1-130-027-51	FILM CASE	0.0056MF	5% 10%	50V 50V	
R8535 1-247-819-00 R8536 1-249-417-11	CARBON CARBON	330 1K	5% 5%	1/6W 1/6W		C622 A. 1-130-512-51   C623 A. 1-130-806-21   C624 A. 1-123-330-51	FILM RECEIVED	0.0047MF 0.1MF 22MF	10% 20%	400V 25V	
R8537 1-249-417-11 R8538 1-249-421-11 R8539 1-249-425-11	CARBON CARBON CARBON	1K 2.2K 4.7K	5% 5% 5%	1/6W 1/6W 1/6W		C625 A.1-161-742-12     C626 A.1-161-742-12		2200PF 2200PF	20%	400V 400V	
R8540 1-247-851-00 R8541 1-247-851-00	CARBON CARBON	6.8K 6.8K	5% 5%	1/6W 1/6W		C627 A.1-161-742-12 C628 A.1-161-742-12	CERAMIC CERAMIC	2200 PF 2200 PF	20% 20%	400V 400V	1 <sup>-4</sup> .
R8542 1-249-425-11 R8543 1-249-425-11	CARBON CARBON	4.7K 4.7K	5% 5%	1/6W 1/6W							
R8544 1-249-429-11 R8545 1-249-429-11 R8546 1-249-429-11	CARBON CARBON CARBON	10K 10K 10K	5% 5% 5%	1/6W 1/6W 1/6W							
R8547 1-247-833-00 R8548 1-247-857-00	CARBON CARBON	1.2K 12K	5% 5%	1/6W 1/6W							
R8549 1-249-425-11 R8550 1-249-417-11 R8551 1-249-429-11	CARBON CARBON CARBON	4.7K 1K 10K	5% 5% 5%	1/6W 1/6W 1/6W							
	INECTOR			,							
WB1 *1-564-346-00 WB2 *1-564-458-11	CONNECTOR, BO				ž.						
WB3 *1-564-457-11 WB4 *1-564-450-11	PLUG, CONNECT PLUG, CONNECT	OR (2.	5MM) 9	)P					· · · · · · · · · · · · · · · · · · ·		

NOTE:

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified.

# G(SW, REG)

Ref.No. Part No.	Description	Remark	Ref.No. Part No.	Description		Remark
D10 D601 A.8-719-901-70 D602 A.8-719-300-52 D603 A.8-719-301-25 D604 A.8-719-901-90	DIODE CTU-38S DIODE CTU-38R DIODE CTL-22S		R611 A.1-247-913-11 R612 A.1-246-525-25 R613 A.1-246-481-25 R614 A.1-246-493-25 R615 A.1-246-487-25	CARBON         1K           CARBON         150K           CARBON         2.2K           CARBON         6.8K           CARBON         3.9K	5% 1/4W 5% 1/4W	
D605 A. 8-719-200-01 D606 A. 8-719-200-01 D607 A. 8-719-920-76	DIODE ESAC33-02N DIODE 10E1 DIODE 10E1 DIODE 152076 DIODE 152076		R616 A. 1-246-515-25 R617 A. 1-246-505-25 R618 A. 1-246-479-25 R619 A. 1-214-779-51 **R620 A. 1-214-769-51	CARBON 56K CARBON 22K CARBON 1.8K METAL FILM 120K METAL FILM 47K	5% 1/4W 5% 1/4W 5% 1/4W 1% 1/4W 1% 1/4W	
COP			*R620 A.1-214-770-51 *R620 A.1-214-771-51	METAL FILM 51K METAL FILM 56K	1% 1/4W 1% 1/4W	
FB601 1-543-060-11 FB602 1-543-060-11 FB603 1-543-060-11 FB604 1-543-060-11			**R620 A. 1-214-772-51 **R620 A. 1-214-773-51 **R620 A. 1-214-774-51 **R620 A. 1-214-775-51	METAL FILM 75K METAL FILM 82K	1% 1/4W 1% 1/4W 1% 1/4W	
FB605 <u>A</u> . 1-543-060-11 FB606 <u>A</u> . 1-543-060-11 FB607 <u>A</u> . 1-543-060-11 FB608 <u>A</u> . 1-543-060-11	CORE CORE CORE CORE		**R620 A.1-214-776-51 **R620 A.1-214-777-51 **R620 A.1-214-778-51 **R620 A.1-214-779-51	METAL FILM 100K METAL FILM 110K METAL FILM 120K	1% 1/4W 1% 1/4W 1% 1/4W 1% 1/4W	
FB609A.1-543-060-11 FB610A.1-543-060-11 FB611A.1-543-060-11 FB612A.1-543-060-11	CORE CORE CORE		*R620 A. 1-214-780-51   *R620 A. 1-214-781-51   *R620 A. 1-214-782-51   *R620 A. 1-214-783-51   *R620 A. 1-214-784-51	METAL FILM 150K METAL FILM 160K METAL FILM 180K	1% 1/4W	
			*R620 <u>↑</u> .1-214-785-51	METAL FILM 220K		
IC601 <u>A</u> .8-759-906-62		÷	* R620 A. 1-214-786-51   * R620 A. 1-214-787-51   * R620 A. 1-214-788-51   * R620 A. 1-214-952-51	METAL FILM 300K	1% 1/4W 1% 1/4W 1% 1/4W 1% 1/4W	
L601 A.1-421-606-11 L602 A.1-410-245-11 L603 A.1-408-933-11 L604 A.1-410-244-11 L605 A.1-408-933-11	L.F.T COIL, CHOKE 2.5MMH COIL, CHOKE COIL, CHOKE 300UH		*R620 A.1-214-953-51 *R620 A.1-214-954-51 *R620 A.1-214-955-51 *R620 A.1-214-956-51 *R620 A.1-214-957-51	METAL FILM 390K METAL FILM 430K METAL FILM 470K	1% 1/4W 1% 1/4W	
L606 ⚠.1-408-933-11	COIL, CHOKE		※R620 A.1-214-958-51 *R620 A.1-214-959-51	METAL FILM 560K METAL FILM 620K		
TRA	NSISTOR		*R620 A.1-214-960-51 *R620 A.1-214-961-51	METAL FILM 680K		
Q601 A. 8-729-301-76 Q602 A. 8-729-177-42 Q603 A. 8-729-177-42 Q604 A. 8-729-178-52 Q605 A. 8-729-178-52	TRANSISTOR STR8124-R TRANSISTOR 2SD774-3 TRANSISTOR 2SD774-3 TRANSISTOR 2SC2785-J TRANSISTOR 2SC2785-J	12 E	**R620 A. 1-214-962-51 **R620 A. 1-214-963-51 **R620 A. 1-214-964-51 R621 A. 1-214-745-51 R622 A. 1-246-509-25	METAL FILM 820K	1% 1/4W 1% 1/4W 1% 1/4W	
Q607 A.8-729-117-52	TRANSISTOR 2SA1175-J TRANSISTOR 2SA1175-J TRANSISTOR 2SA1175-J		R623 A.1-246-493-25 R626 A.1-246-481-25	CARBON 6.8K		
·	ISTOR		R627 A. 1-246-481-25 R628 A. 1-246-497-25	CARBON 2.2K CARBON 10K	5% 1/4W 5% 1/4W	
R601 A.1-246-429-25 R602 A.1-246-429-25 R603 A.1-214-745-51	CARBON 15 5% 1/4W CARBON 15 5% 1/4W METAL FILM 4.7K 1% 1/4W			METAL FILM 150K METAL FILM 5.1K NSFORMER		
R604 A. 1-214-745-51 R605 A. 1-217-267-11	METAL FILM 4.7K 1% 1/4W	F .	T601 A.1-421-460-31 T602 A.1-448-071-11	TRANSFORMER, CURRENT TRANSFORMER, POWER		
R606 A. 1-246-457-25 R607 A. 1-246-418-25 R608 A. 1-246-449-25 R609 A. 1-246-449-25 R610 A. 1-246-497-25	CARBON         220         5%         1/4W           CARBON         5.1         5%         1/4W           CARBON         100         5%         1/4W           CARBON         100         5%         1/4W           CARBON         10K         5%         1/4W		T603 A. 1-447-106-11	TRANSFORMER, DRIVE		
			•	NOTE ·		

NOTE:

The components identified by shading and mark A are critical for safety. Replace only ith part number specified.

Remark Ref.No. Part No. Description MISCELLANEOUS A.1-230-089-21 RESISTOR ASSY, HIGH-VOLTAGE A.1-413-219-11 SWITCHING REGULATOR (TK-10) A.1-417-125-11 SELECTOR, ANTENNA A.1-451-269-12 DEFLECTION YOKE (SY-174) ⚠.1-452-261-31 CRT NECK ASSY (362) ⚠.1-452-361-12 NECK ASSY, CRT (NA365) ⚠.1-452-361-22 NECK ASSY, CRT (NA365) ⚠.1-463-471-33 SYNTHESIZER UNIT, FREQUENCY 1-509-841-12 OUTLET, AC 1-536-922-11 TERMINAL BOARD, INPUT/OUTPUT TERMINAL BOARD, INPUT/OUTPUT 1-536-998-11 \*1-551-382-00 \*1-557-056-31 CABLE P-P CABLE, P-P CORD, POWER A.1-557-970-11 SWITCH, THERMAL REED ⚠.1-570-258-21 A.8-737-551-05 CRT (SD-174(G)) A.8-737-552-05 CRT (SD-174(B)) A.8-737-553-05 CRT (SD-174(R)) SP901 1-503-601-11 SP902 1-503-601-11 **SPEAKER** SPEAKER TU1011.1-463-470-00 TUNER, ET (BT-896) (Serial No.7,000,001 and later) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ACCESSORIES AND PACKING MATERIALS COMMANDER ASSY (RM-730) A-1470-694-A MIXER, U/V BAG, PROTECTION BAND (Serial No.2,000,001 and later) ⚠.1-417-135-11 \*4-359-683-00 4-375-541-01 BOARD, TOP (Serial No.2,000,001 and later) 4-375-542-01 CUSHION (UPPER) (ASSY) (Serial No.2,000,001 and later) CUSHION (LOWER) (ASSY) 4-375-543-01 4-375-544-01 (Serial No.2,000,001 and later) 4-375-545-01 SHEET, PROTECTION 4-375-546-01 INDIVIDUAL CARTON (Serial No.2,000,001 and later) TRAY (Serial No.2,000,001 and later) BAND (Serial No.7,000,001 and later) 4-375-547-01 \*4-380-839-01 BOARD, TOP (Serial No.7,000,001 and later) \*4-380-840-01 \*4-380-841-01 CUSHION (LOWER) (ASSY) (Serial No.7,000,001 and later) CUSHION (UPPER) (ASSY) \*4-380-842-01 (Serial No.7,000,001,and later)
INDIVIDUAL CARTON \*4-380-843-01 (Serial No.7,000,001 and later) TRAY (Serial No.7,000,001 and later) CUSHION (Serial No.7,000,001 and later) MANUAL, INSTRUCTION \*4-380-844-01 \*4-380-850-01 4-482-213-21 INSTRUCTION 4-491-213-22

NOTE:

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified.

# RM-730

# SERVICE MANUAL



May, 1986

## **SPECIFICATIONS**

Remote control system

Infrared control

Power requirements

3V DC

Battery size AA × 2

(IEC battery designation R6)

Dimensions

Approx.  $55 \times 19.8 \times 175$  mm (w/h/d)

(21/4 × 25/32 × 7 inches)

Weight

130g (41/2 oz), including batteries

Design and specifications are subject to change without notice.

# RGB multi input (8-pin plug)

Pin No.	Signal assignment
1	Intensity input
2	Red input
3	Green input
4	Blue input
5	Ground
6	Ground
7	H. sync or composite sync
8	V. sync

REMOTE COMMANDER SONY®



## 1. OPERATION

## **VIEWING TV PROGRAMS**

This set is capable of receiving normal VHF and UHF broadcasts plus cable TV channels. (See "Cable TV channel chart" on this page.)

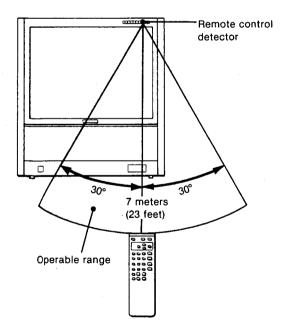
Usually the Remote Commander is all that is needed to operate the unit in everyday use.

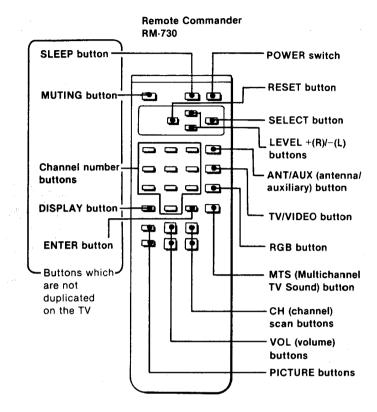
## Remote Commander RM-730

- 1 Turn the Remote Commander face down, press the tab and lift the cover.
- 2 Place batteries in the Commander with the polarities in the correct directions as illustrated inside the case.
- 3 Replace the cover.

#### **Notes**

- Use 2 size AA batteries (IEC designation R6).
- In normal operation, batteries will last up to half a year. If the set does not operate properly, the batteries might be exhausted. Replace all with new ones.
- To avoid damage from possible battery leakage, remove the batteries for extended unused periods.
- Be sure that there are no obstructions between the Commander and the unit.
- Operable range is limited.





## Cable TV channel chart \*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to this chart.

Num	ber o	n this	set			1	5	6	14	15	16	17
Corre	spon	ding	CATV	char	nnel	A-8	A-7	A-6	Α	В	С	D
18	19	20	21	22	23	24	25	26	27	28	29	30
E	F	G	Н	ī	J	К	L	М	N	0	Р	Q
31	32	33	34	35	36	37	38	39			93	94
R	S	Т	U	٧	W	W+1	W+2	W+3			W+57	W+58
95	96	97	98	99	100	101	102			123	124	125
A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61			W+82	W+83	W+84

Check with your local cable TV company for more complete information on the available channels.

\*The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

#### Preparation

Make sure the following are properly set.

- On-screen "VIDEO 1, 2 or 3", "EXT-A" or "RGB" indications and the RGB or VIDEO lamp should be off. (Press TV/VIDEO button or RGB button as many times as necessary until they go out.)
- MONO/AUTO STEREO selector on the sub control panel should be set to AUTO STEREO position.
- If the "SAP" indication appears, press the MTS button twice so that the "MAIN" indication is displayed.

# Depending on the channel to be viewed, check the following and change as necessary.

- CABLE ON/OFF selector:
  - —For VHF and UHF channels, set to OFF ...
  - For cable TV channels, set to ON =.
- On-screen "AUX" \* indication:

(Press ANT/AUX button to change as necessary.)

- —For VHF, UHF and regular cable TV channels, the indicator should be off.
- —For cable TV channels, the indicator should be displayed.

\*The displays, "VIDEO", "EXT-A", "RGB" or "AUX" indicate that signals fed in through the VIDEO 1/3 IN jacks, VIDEO 2 IN AV uniconnector, the external audio jacks, the RGB multi input connector or through the AUX terminals are being received.

#### Operation

## 1 Press POWER to turn on the set.

The channel number will be displayed on the screen and the SLEEP lamp will light up for several seconds.

- 2 Select channels in one of the following two ways.
  - Press the numeral(s) of the channel and then press ENTER.
  - Ex. To select channel 6, press 6 and then ENTER.
    To select channel 125, press 1, 2, 5 and then
    ENTER.

If you pressed a wrong numeral, wait for a few seconds and it will disappear. Then try again.

 Press CH "+" for higher-numbered channels and "-" for lower-numbered channels. Preset channels will appear in sequence. (For presetting desired channels, see page 10.)

The channel display will remain on the screen for a few seconds. To keep the display on the screen, press DISPLAY.

3 Adjust the volume and picture to your preference, if necessary.

Press VOL "+" to increase volume, or "-" to decrease it.

Press PICTURE "+" to increase picture contrast, or "-" to decrease it.



If the picture rolls vertically, turn V HOLD control of the registration panel on the front side until the picture stabilizes.



To mute the sound immediately, press MUTING. The "MUTING" display will appear and remain on the screen. Press it again to restore the sound to its previously-set level or press VOLUME +.

To turn off the set, press POWER again.

To have the set turn off automatically after one hour, press SLEEP. The "SLEEP" display will appear on the screen a few seconds and the SLEEP lamp on the control panel will remain lit for one hour.

To cancel the sleep timer, press SLEEP again so that the "SLEEP" display disappears, or turn off the set.

# LISTENING TO MULTICHANNEL TV SOUND(MTS) BROADCASTS

To receive a stereo program

Normally set the MONO/AUTO STEREO selector to AUTO STEREO. In this position, the STEREO lamp on the control panel will light up whenever a stereo broadcast is received.

To listen to the stereo sound, select the MAIN mode with the MTS button so that the on-screen MAIN indicator appears. The stereo sound will be heard from the left and right speakers.

Every push on the MTS button changes the indicator below the channel number as follows:



When there is a SAP (Second Audio Program) broadcast Select the SAP mode so that the SAP indicator will be displayed and only the SAP sound will be heard from both speakers.

## To listen to both MAIN and SAP broadcasts

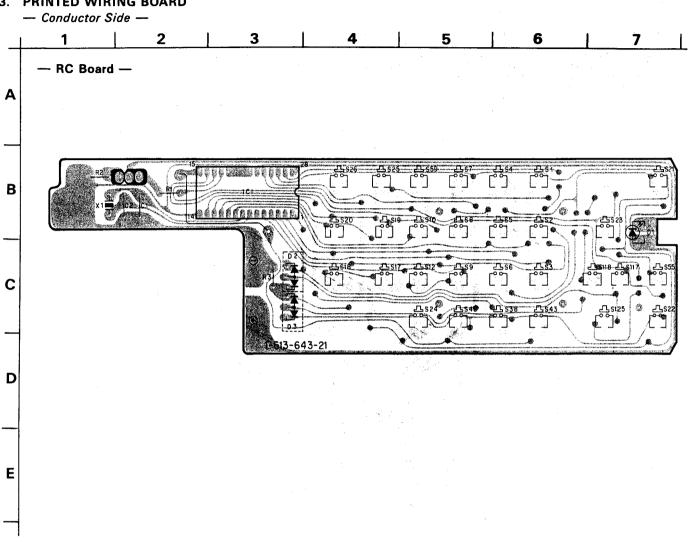
Select the BOTH mode so that the BOTH indicator is displayed. The MAIN and SAP sounds will come out from the left and right speakers respectively.

The MAIN sound becomes monaural(mixed) even if it is a stereo broadcast, as the sound comes only from the left speaker.

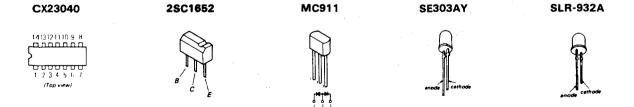
#### 2. SCHEMATIC DIAGRAM 3 4 2 5 6 7 Α -about 15mS-IC I CX23040 KEYBOARD REMOTE CONTROL ENCODER 11010 DI SE303AY D2,3 MC 9II STOPPER IND 6 DI В 3) KI 3 R | 120(1/6W) )oï 0.19 0.12 IC I (0) ∐ (1) k15 Q1 2SC1652 Ш \_\_\_\_S46 \_\_\_S3E MDI 23 INDICATOR DRIVE 27) KT 6 MD2 22 MD3 21 DRY BATTERY UM-3X2 26) KI7 (25) KI 8 (9) KO1 (10) KO2 (11) KO3 (11) KO3 (12) KO4 (13) KO5 (15) KO6 C MD5 (19) 3.4Vp-p(480kHz) H vss(4) W H 3.2Vp-p (480kHz) 16 K07 T 220p D KEY MATRIX TABLE Ε K06 S25 PICTURE + S33 \$49 KII SI SII7 LEVEL + (R) SII8 LEVEL - (L) 59 SI7 CH + 541 S57 SIO S18 CH -S26 PICTURE 5 34 542 \$50 \$58 K13 53 \$27 \$ 35 S43 ANT/AUX DISPLAY 551 SI25 SELECT KI4 S4 ENTER 520 \$36 \$37 S12 VOL -\$28 \$60 S13 S2I MUTING \$29 \$30 545 S 53 \$61 K16 S6 S22 POWER S38 TV/VIDEO S46 R G B \$50 S62 S23 RESET S24 MTS \$31 \$32 S 39 S 40 547 S55 SLEEP S63 548 S 56 F • All Capacitors are in $\mu F$ unless otherwise noted, pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics. G • All resistors are in ohms, 1/6W unless otherwise noted. • $k\Omega = 1000\Omega$ , $M\Omega = 1000k\Omega$ • All voltages are in V. Voltages are dc with respect to ground unless otherwise noted. H ullet Reading are taken with a 10 M $\Omega$ digital multimeter. Voltages and waveform are for when 1 button is pressed. Voltages in ( ) are taken with button not pressed. Voltage variations may be noted due to normal ı production tolerances. • ---: B + bus.

**RC** 

# 3. PRINTED WIRING BOARD



# 4. **SEMICONDUCTORS**

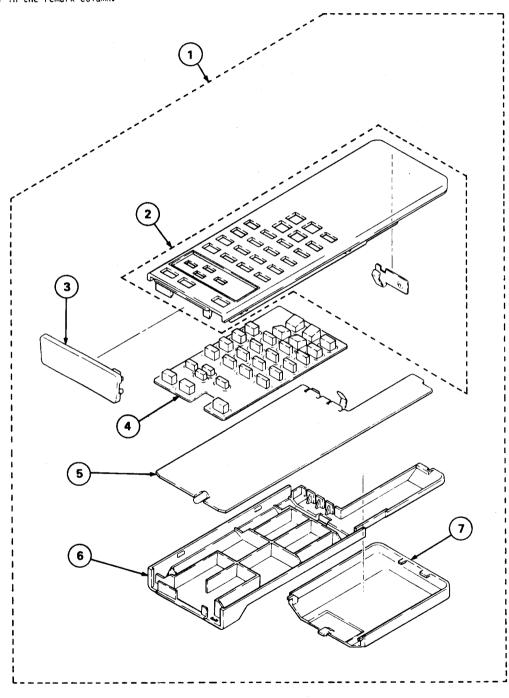


# 5. EXPLODED VIEW

- NOTE:

   Items with no part number and no description are not stocked because they are seldom required for routine service.

   The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



No.	Part No.	Description	Remark   N	lo.	Part No.	Description
1	A-1470-694-A	COMMANDER ASSY (RM-730)	2-7	5	*1-613-643-21	
2		CASE ASSY, UPPER	1	6	4-373-824-01	
3		PLATE, FROSTED		7	4-373-821-01	COVER, BATTERY
4	4-375-448-01	SHEET, RUBBER	ľ			

RC

# 6. ELECTRICAL PARTS LIST

## NOTE:

Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

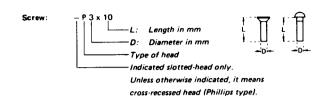
CAPACITORS

• MF : μF, PF : μμF

RESISTORS All resistors are in ohms
F: nonflammable

Ref.No. Part No.	Description	Remark
*1-613-643-21	RC BOARD	
4-350-924-00 4-372-835-01		
CAP	AC I TOR	
C1 1-102-110-00 C2 1-102-110-00	CENTRALIO ELOTT	50V 50V
<u>D10</u>	<u>DE</u>	
D1 8-719-107-82 D2 8-719-000-04 D3 8-719-000-04		
<u>IC</u>		
IC1 8-759-909-49	IC CX23040	
TRA	NSISTOR	•
Q1 8-729-965-22	TRANSISTOR 2SC1652	
RES	SISTOR	
R1 1-247-809-00 R2 1-247-767-00 R3 1-247-895-00	CARBON 2.2 5% 1/6W	
CRY	'STAL	
X1 1-527-476-41	OSCILLATOR, CERAMIC	

# HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks
	<u> </u>	SCREWS	
P	€∋	pan-head screw	binding-head (B) screw for replacement
PWH	₽	pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP	853	pan-head screw with spring washer	binding-head (B) screw and spring washer for replace- ment
PSW PSPW	<b>98</b> 0	pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R	€>	round-head screw	binding-head (B) screw for replacement
к	Þ	flat-countersunk-head screw	
RK	€>	oval-countersunk-head screw	
В	þ	binding-head screw	
Ť	€	truss-head screw	binding-head (B) screw for replacement
F	₽⊃	flat-fillister-head screw	
RF	€∋	fillister-head screw	
BV	€⊃	brazier-head screw	7

Nut, Washer,	Retaining ring:
	N 3  Diameter of usable screw or shaft
	Reference designation

Reference Designation	Shape	Description	Remarks
	l	SELF-TAPPING SCRE	ws
TA	<b>⊕</b>	self-tapping screw	ex: TA, P 3 x 10
РТР	<b>€</b>	pan-head self-tapping screw	binding-head self- tapping (TA, B) screw for replacement
PTPWH	<b>€</b>	pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH	<b>€</b>	pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
sc		set screw	
SC	-@€:3-	hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
	d	NUT	
N	-()-()-()	nut	
		WASHERS	
w	0	flat washer	
sw	- <b>9</b> }	spring washer	
LW	0	internal-tooth lock washer	ex: LW3, internal
LW	0	external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E	0	retaining ring	
G	୍ଷ	grip-type retaining ring	